



U.S. Department
of Transportation

**Bureau of
Transportation
Statistics**

National Transportation Statistics

Annual Report, September 1993

Historical Compendium, 1960-1992

- ★ Air Carrier
- ★ General Aviation
- ★ Modal Profiles
- ★ Passenger Miles



- ★ Truck ★ Highway
- ★ Bus
- ★ Cargo Operation
- ★ Vehicle Miles



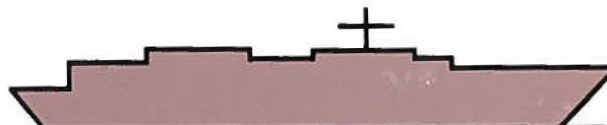
- ★ Railroads
- ★ Cost Data ★ Amtrak
- ★ Operating Expenses / Revenue
- ★ Local Transit



- ★ Automobile
- ★ Transportation Energy
- ★ Economic Data
- ★ Inventory



- ★ Water Transit
- ★ Recreational Boating
- ★ Transportation Trends
- ★ Safety Statistics



- ★ Oil Pipeline
- ★ Natural Gas Pipeline
- ★ Energy Cost and Consumption
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Bureau of Transportation Statistics

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AVAILABILITY OF REPORTS/PRODUCTS

In addition to the *National Transportation Statistics* Annual Report, the following is a list of reports/products prepared by the RSPA/Volpe Center's, Center for Transportation Information and/or the Bureau of Transportation Statistics. Inquiries may be directed by telephone (617) 494-2450, fax (617) 494-3064, or by writing to DOT/RSPA/Volpe National Transportation Systems Center, DTS-44, Kendall Square, Cambridge, MA 02142, ATTN: Patricia Harrington.

Air Carrier Traffic Statistics is a monthly report compiled by RSPA's Office of Airline Statistics. The data are reported on RSPA Form 41, Schedules T-1(a), T-01(b), and T-1(c) by Large Certificated Air Carriers, that is, by carriers holding a certificate issued under Section 401 of the Federal Aviation Administration Act of 1958 and that operate aircraft designed to have a maximum passenger seating capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds or that conduct international operations. The report is available on a subscription basis, January 1992 - December 1991. Price: \$400.

Air Carrier Financial Statistics is a quarterly report compiled by the RSPA's Office of Airline Statistics. The financial data are reported on RSPA Form 41 Schedules by Large Certificated Air Carriers (see above definition). The report is available on a subscription basis, January 1992 - December 1992. Price: \$200.

Air Carrier Industry Scheduled Service Traffic Statistics is a quarterly report compiled by RSPA's Office of Airline Statistics. The data are obtained from the carrier reports on either Form 41, Schedule T-1(a) or Form 298-C, Schedules A-1 and T-1. The publication incorporates the scheduled service activities of the Part 298 small certificated and commuter air carriers with large certified medium regionals into one group in one volume. It includes group totals for large certified air carriers in the major, national and large regional groupings. The report is available on a subscription basis, January 1992 - December 1992. Price: \$200.

U.S. International Air Travel Statistics consists of passenger travel between the U.S. and foreign countries, including arrivals and departures, and distributed by scheduled and charter flights and U.S. and foreign flag carriers. Also includes selected statistics for commercial traffic between U.S. ports and foreign countries. This data is available on a subscription basis that includes 12 monthlies, 4 quarterlies, and 1 calendar year. Price \$450.

1990 Nationwide Personal Transportation Survey (NPTS) Public-Use Tape. The 1990 NPTS is a telephone survey of 22,300 households throughout the U.S. conducted for the Department of Transportation's Federal Highway Administration by Research Triangle Institute. The 1990 NPTS provides data on the relative use of various modes of transportation, the characteristics of those traveling, and the characteristics of the trips taken, such as purpose, duration, destination, time of day, and vehicle occupancy. The 9-track tape is available in SAS (Statistical Analysis System) or EBCDIC at 6250 bpi. Price: \$150.

1983 Nationwide Personal Transportation Survey (NPTS) Public-Use Tape. The 1983 NPTS is an in-the-home survey of 6,500 households performed by the professional field staff of the Bureau of the Census for DOT's Federal Highway Administration. The 1983 NPTS provide data on the relative use of various modes of transportation, the characteristics of those traveling, and the characteristics of trips taken, such as purpose, duration, destination, time of day, and vehicle occupancy. The 9-track tape is available in SAS (Statistical Analysis System) or EBCDIC at 6250 bpi. Price: \$150.

1977 Nationwide Personal Transportation Survey (NPTS) Public-Use Tape. The 1977 NPTS is an in-the-home survey of 1,800 households performed by the professional field staff of the Bureau of the Census for DOT's Federal Highway Administration. The 1977 NPTS provides data on the relative use of various modes of transportation, the characteristics of those traveling and the characteristics of the trips taken, such as purpose, duration, destination, time of day, and vehicle occupancy. The 9-track tape is available in EBCDIC at 6250 bpi. Price: \$150.

1990 NPTS Diskettes are an overall reduction of the six files in the public-use tape. The files were condensed from 72 megabytes to 16.5 megabytes by selecting only certain data elements for inclusion and removing any

redundancies. The diskettes are compressed ASCII fixed length records from six separate files. The complete set of diskettes (3 1/2" high density) will require approximately 20 megabytes of storage space. The cost of the diskettes varies and interested parties should contact the RSPA/Volpe Center for further information.

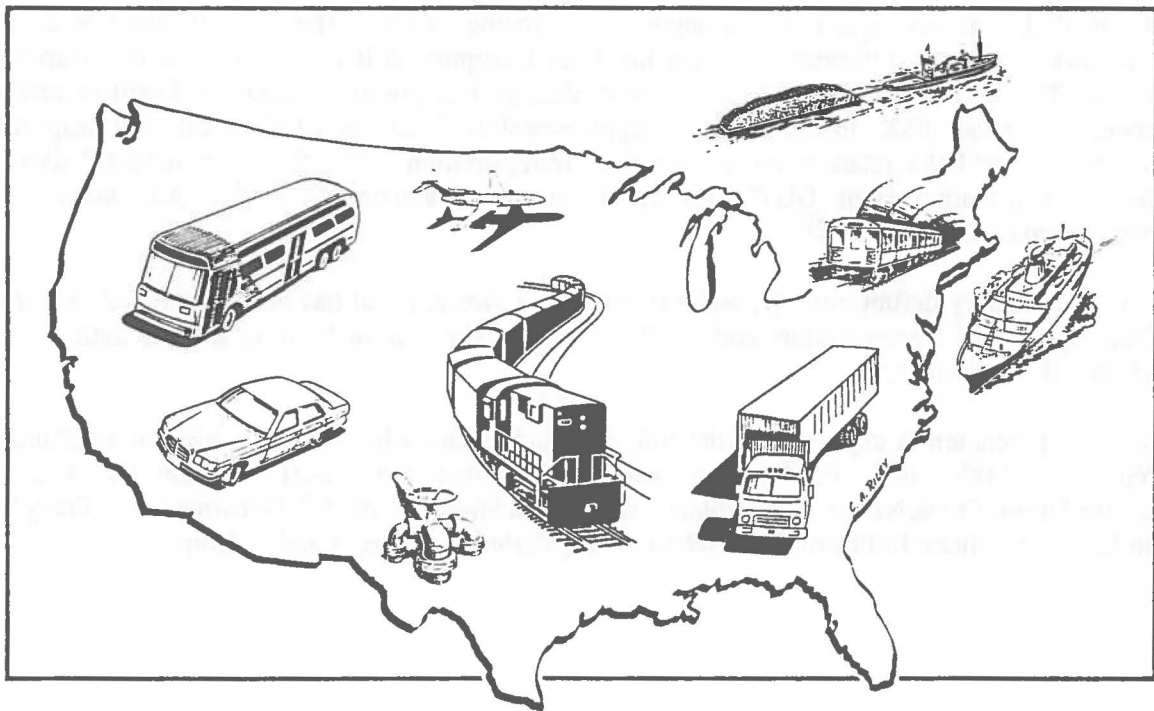
1990 NPTS Special Tabulation Service is offered to fill a gap evident in previous NPTS surveys. Data users would often need answers to specific questions that were not addressed in the published reports. In the past, the only option for the data user was to obtain the tape and run the specific tabulations needed. The cost varies by the time required for each table, however, an estimated cost for a single standard table with a set of categories on each axis is \$150-200.

Directory of Transportation Data Sources, a compilation of transportation data sources within DOT and other Federal agencies, will be released by the Bureau of Transportation Statistics (BTS) in conjunction with the RSPA/Volpe Center in November 1993. Interested parties should contact the RSPA/Volpe Center.

Directory of Transportation Data Specialists, a compilation of transportation data specialists cross-referenced by their area of specialization within DOT and other Federal agencies, will be released in the near future by BTS in conjunction with the RSPA/Volpe Center. Interested parties should contact the RSPA/Volpe Center.

A *Data Information Line* has been established by the BTS and RSPA/Volpe Center to answer public inquiries relating to transportation information. The information line specializes in providing readily accessible transportation data and/or referrals for information to the proper individual/organization. The toll-free number is 1-800-853-1351 and is open 8:15 a.m. - 4:45 p.m., Monday through Friday. After hours and on weekends, calls will be received electronically and acknowledged the following workday.

INTRODUCTION



INTRODUCTION

Developing and maintaining vital transportation statistics is one of the missions of the U.S. Department of Transportation (DOT). The *National Transportation Statistics* (NTS) Annual Report is produced to support this mission and is intended to disseminate national transportation and transportation-related energy statistics within the industry.

Under an agreement with the Department's Bureau of Transportation Statistics (BTS), DOT's Research and Special Programs Administration's Volpe National Transportation Systems Center (RSPA/Volpe Center) has compiled an historical twenty-second edition of the NTS report. Summary statistics for the years 1960-1991, and 1992 when available, are illustrated in this publication. In some instances, data extend back to 1955. As the compilation of statistical material is usually a tedious and time-consuming process, reliable sources often represent a one to two year time lag. Consequently, this report incorporates the latest available information at the time of publication.

While most of these statistics are available from various sources such as government agencies and trade associations (see Appendix D), they are presented here in one convenient and comprehensive report. Particular attention has been taken in documenting the sources of all data. These sources are noted either on the same page as the data or in Appendix A--Source Information. The reader is urged to utilize the Source Information, and those who may want additional information or an explanation regarding the data in this publication, should check with the source(s).

Three different formats are used -- 1) Tree Displays, 2) Modal Profiles, and 3) Transportation Trends - to spotlight various aspects of the major transportation modes. The RSPA/Volpe Center's annual *Transportation Safety Information Report* has been incorporated into Section II of the Transportation Trends. This information presents and compares data for transportation accidents, fatalities, and injuries between 1960 and 1992. In addition, two supplemental data sections detail the role of transportation in the economy and the relationship of energy to transportation. The third supplemental data section presents information from DOT's Federal Highway Administration's *1990 Nationwide Personal Transportation Survey* (NPTS).

In order to clarify definitions, Appendix B contains a glossary that has been assembled and organized according to each transportation mode. Also, to assist the user in locating specific data, an index is included in Appendix C.

Special appreciation is expressed to the following individuals who provided valuable assistance in the preparation of this report: Patricia Harrington, RSPA/Volpe Center; Susan Crayton, Chuck Cucurullo, Marilyn Gross, Frank Nelson, John Rohner, and Colson Simmons, EG&G Dynatrend; and Tracy Borsini, Jim Edwards, Micky LoPresti, Dick Schmidt, and Barbara Siccone, Camber Corp.

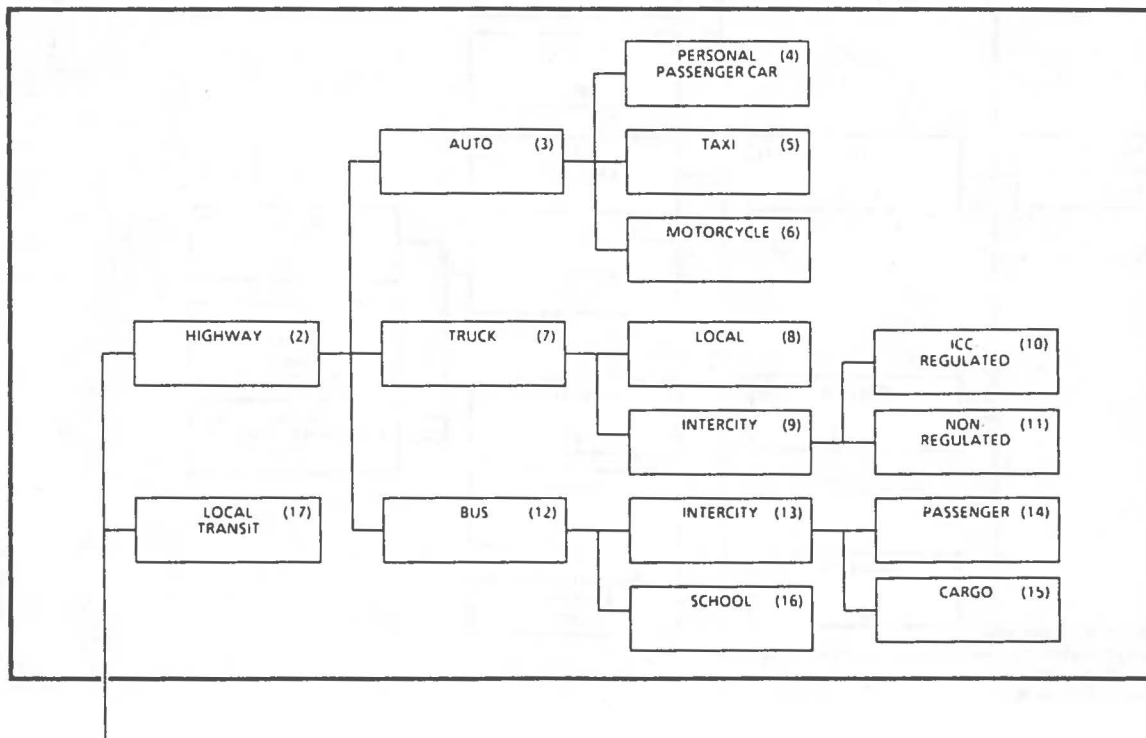
TREE DISPLAYS

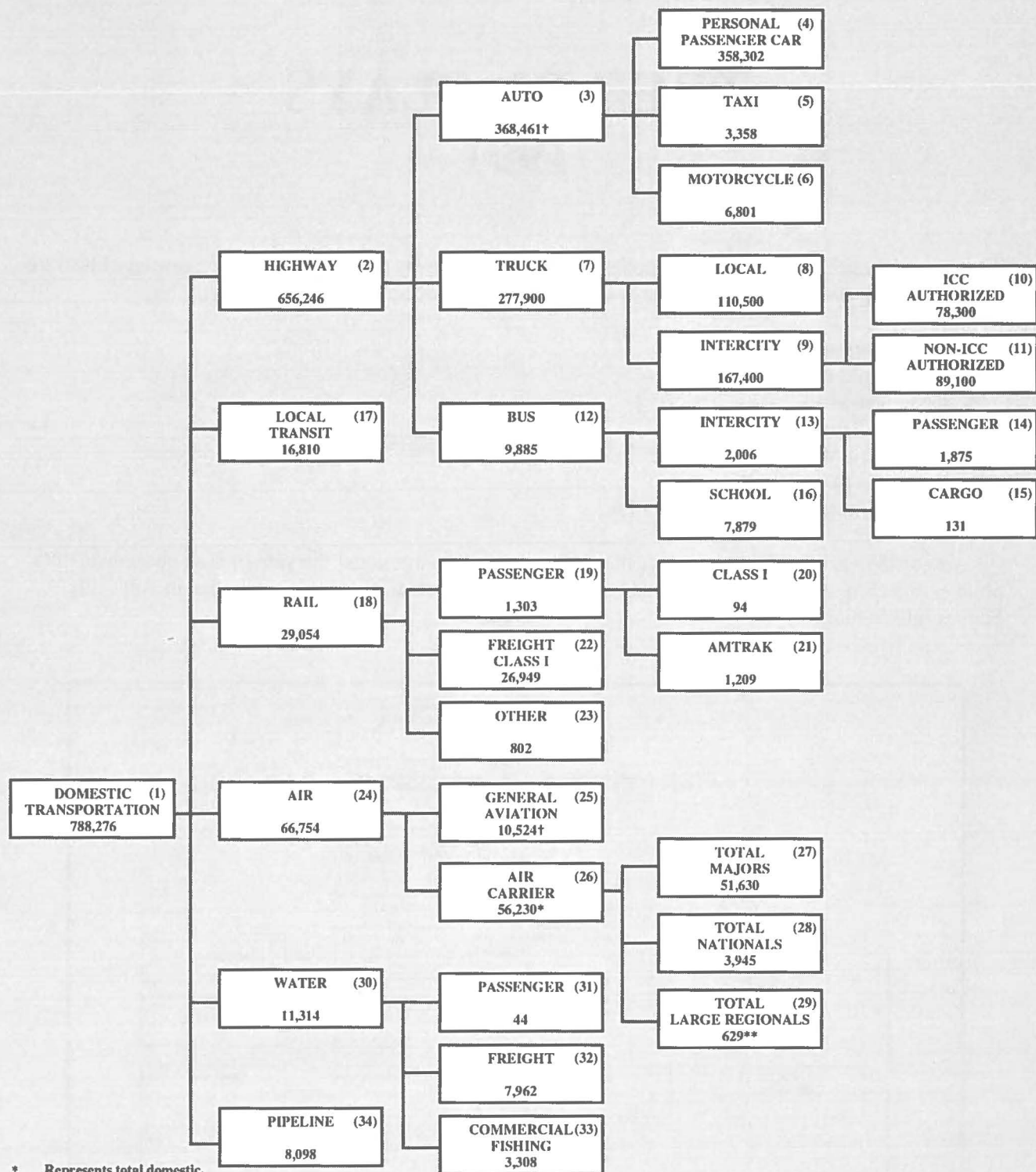
1991

The interrelationships of the various modes are presented here via tree displays. These displays illustrate the relationship between and within each transportation mode for the following areas:

- Expenditures and Revenues
- Vehicle-Miles
- Passenger-Miles
- Revenue Ton-Miles of Freight
- Number of Vehicles
- Number of Fatalities
- Energy Consumed in Transportation

Because of the variety of data sources, the totals may not always equal the sum of the subordinate data. Sources for each statistic may be found by locating its parenthetical reference number in Appendix A - Source Information.

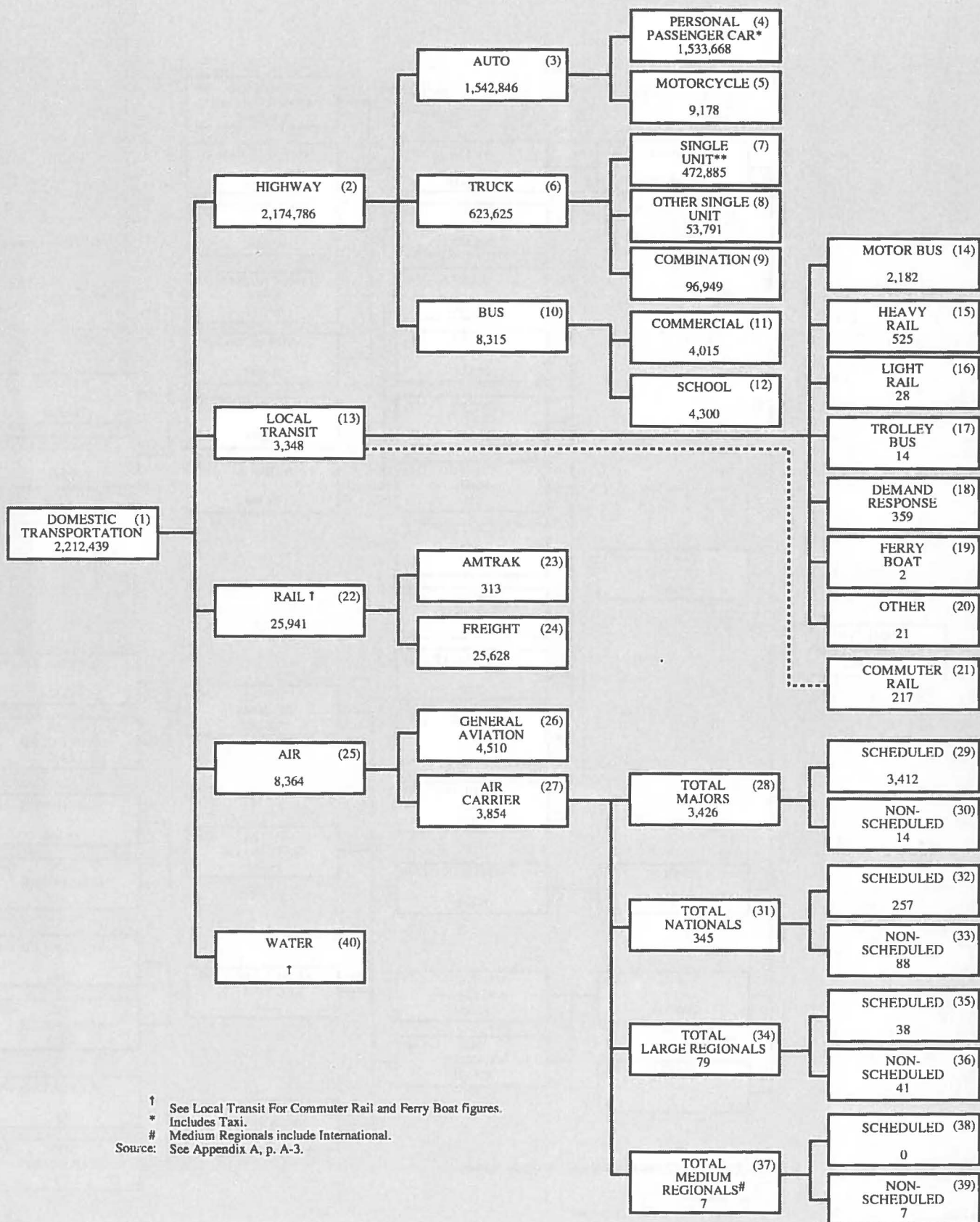




* Represents total domestic.
 ** Includes some international data that cannot be segregated.
 † Represents Expenditures.

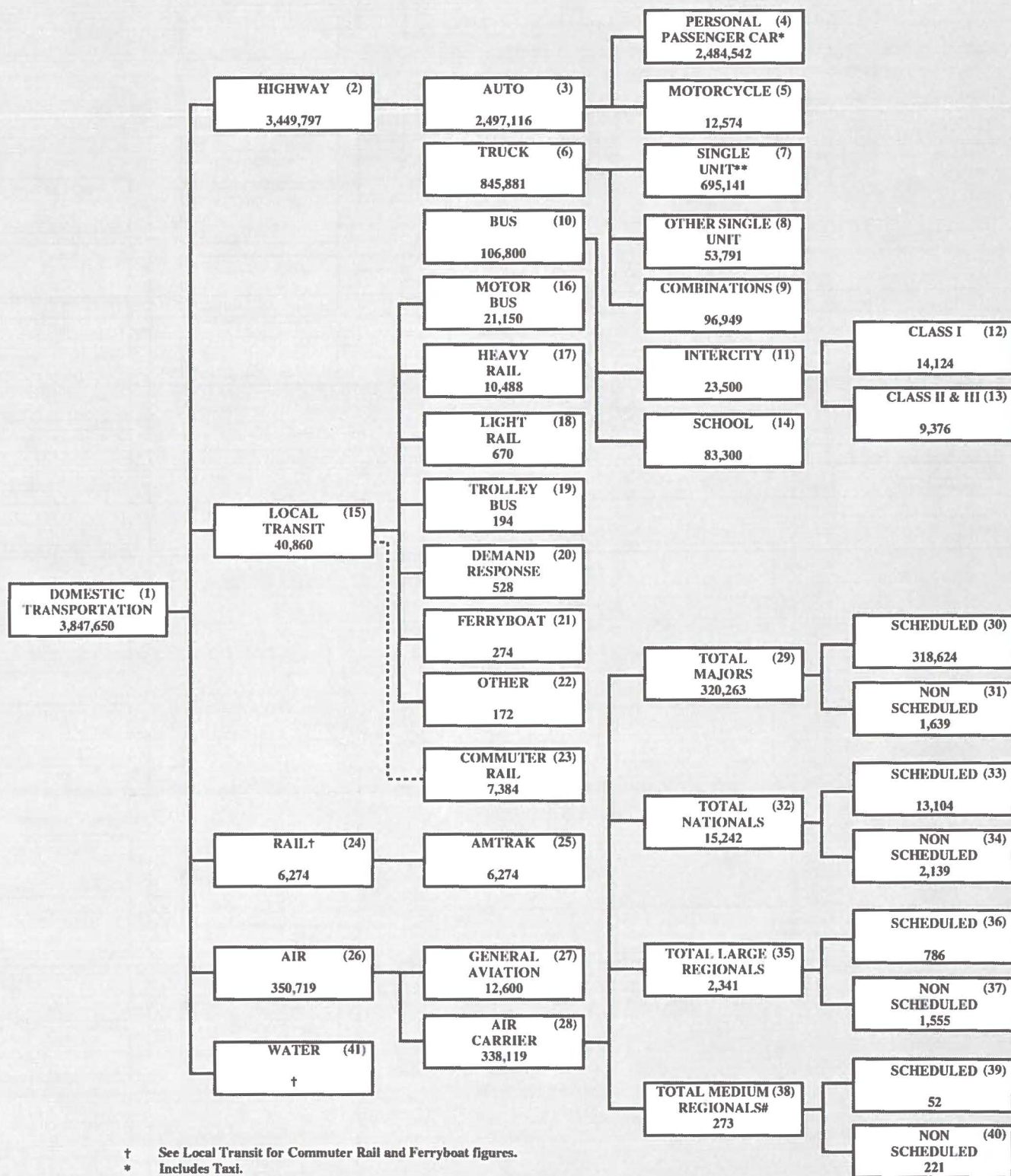
Source: See Appendix A, p. A-2.

Figure 1. Expenditures and Revenues (\$ millions) - 1991



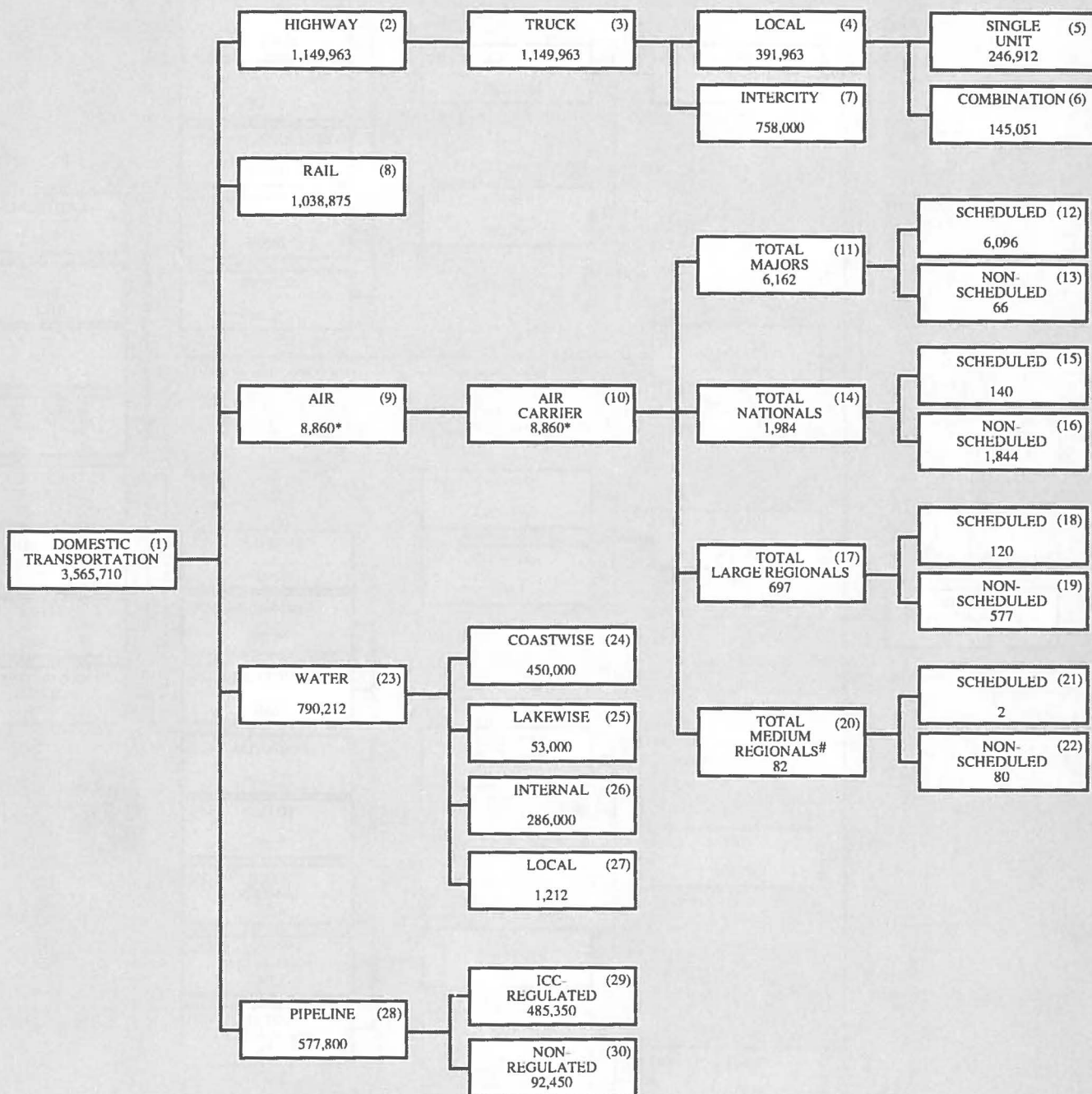
† See Local Transit For Commuter Rail and Ferry Boat figures.
 * Includes Taxi.
 # Medium Regionals include International.
 Source: See Appendix A, p. A-3.

Figure 2. Vehicle-Miles (millions) - 1991



† See Local Transit for Commuter Rail and Ferryboat figures.
 * Includes Taxi.
 ** 2-axle, 4-tire trucks.
 # Medium Regionals include International.
 Source: See Appendix A, p. A-4.

Figure 3. Passenger-Miles (millions) - 1991



* Totals may not agree due to rounding of numbers.
 # Medium Regionals include International.
 Source: See Appendix A, p. A-5.

Figure 4. Revenue Ton-Miles of Freight (millions) - 1991

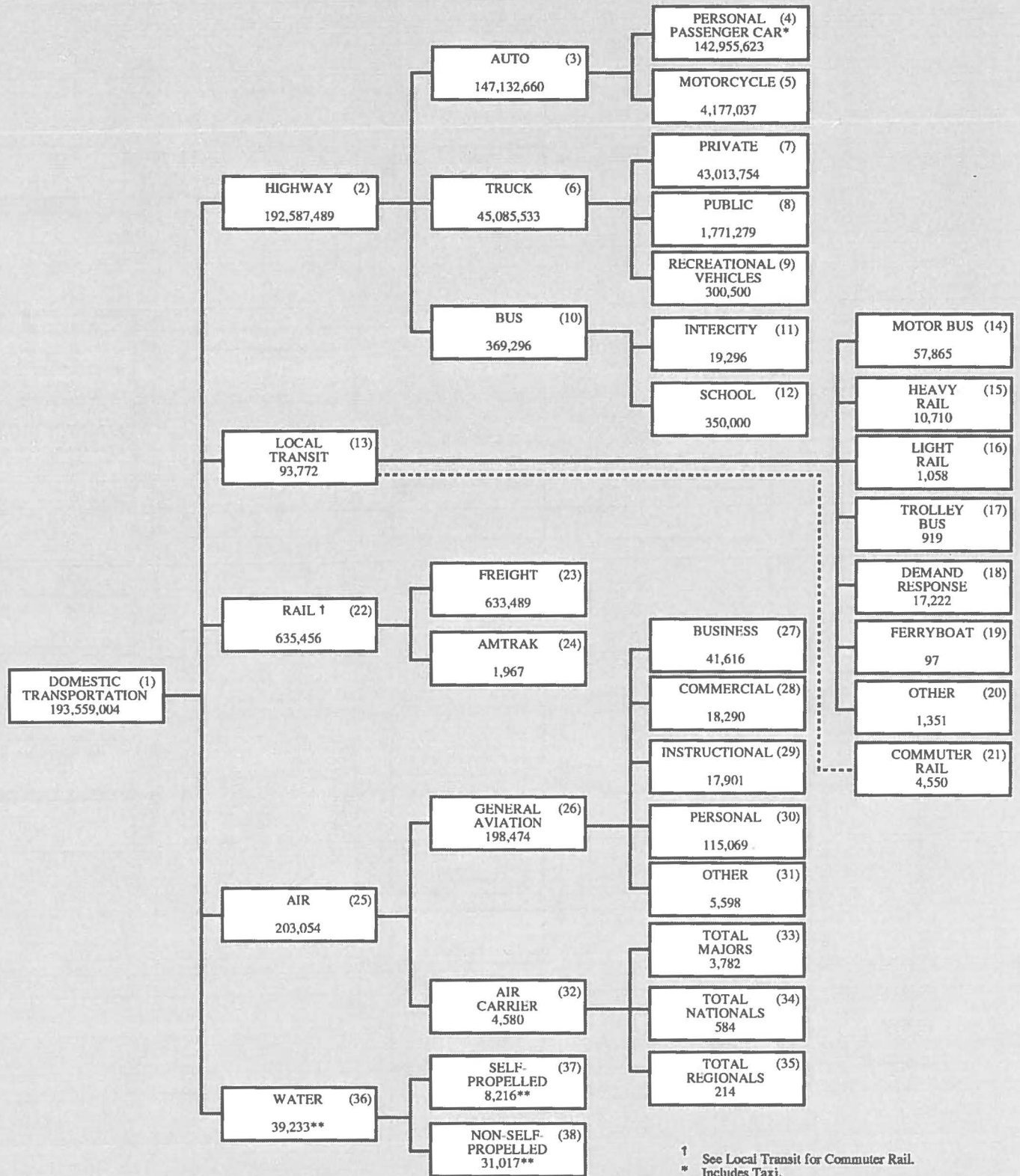
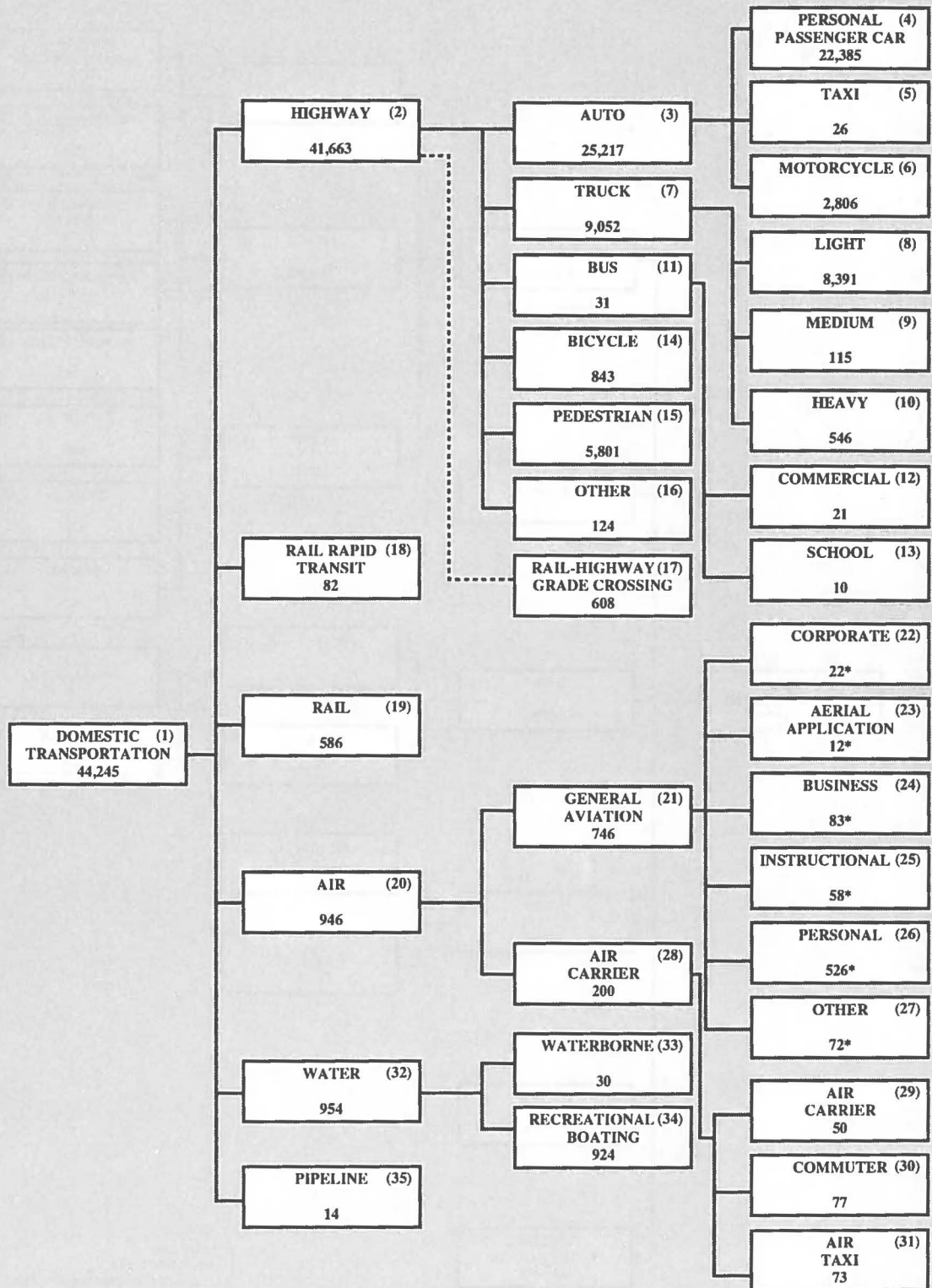


Figure 5. Number of Vehicles - 1991



* These figures are preliminary and do not add to total General Aviation.
Source: See Appendix A, pp. A-6, A-7.

Figure 6. Number of Fatalities - 1991

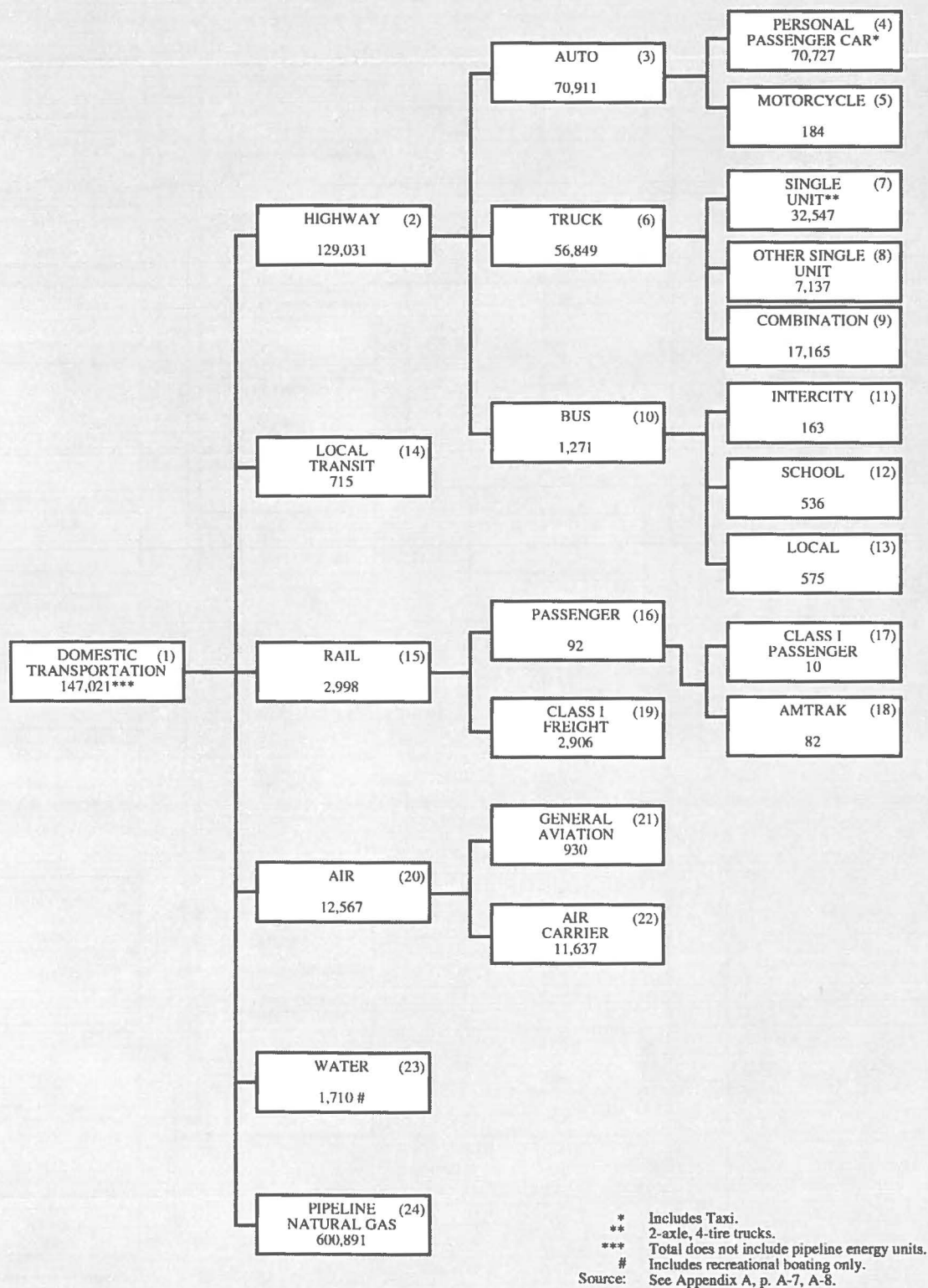


Figure 7. Energy Consumed in Transportation - 1991

MODAL PROFILES

1960, 1970, 1980, 1990, and 1991

The Modal Profiles present financial, inventory, and performance data comparisons for 1960, 1970, 1980, 1990, and 1991. In some cases, not all of the types of data in these profiles are available for every mode, nor are they always applicable. The following list indicates the type of data usually included in each group:

- | | | |
|------|---------------------------------------|-----------------------------------|
| I. | Financial | |
| | A. Expenditures (private modes) | D. Federal expenditures |
| | B. Operating Revenue (for-hire modes) | E. State and local expenditures |
| | C. Operating expenses | |
| II. | Inventory | |
| | A. Number of companies | C. Number of employees |
| | B. Number of vehicles | D. Mileage |
| III. | Performance | |
| | A. Vehicle-miles | E. Tons of freight hauled |
| | B. Passenger-miles | F. Average passenger trip length |
| | C. Number of passengers carried | G. Average length of freight haul |
| | D. Ton-miles | H. Fatality and accident rates |

Specific source references are obtained as follows: the letter directly to the right of the data element applies to all subsequent data elements in that column until the next letter appears. In some cases, data are shown that may not appear directly in the sources listed. These were obtained by addition/subtraction of referenced data or of other data in its column, and are marked with an asterisk.

For example: General Aviation Profile

1991

3,423 ^a	reference letter 'a'
7,101	also applies to the two
10,524	subsequent data elements
10,033 ^b	reference letter 'b' refers to
31,583	a different data source.

The specific source number and page or table reference may then be found at the end of each modal profile. All sources are listed in Appendix A--Source Information.

AIR CARRIER PROFILE (page 1 of 4)

	1960 ¹	1970 ¹	1980 ¹	1990 ¹	1991 ¹
I. FINANCIAL					
Operating Revenues (\$ thousands)					
Domestic					
Majors, all services	1,942,635 ^a	6,272,775 ^a	23,012,073 ^b	53,333,552 ^d	51,269,729 ^d
Nationals, all services	146,481	736,831	3,182,418	4,167,552 ^e	3,944,745 ^e
Large Regionals, all services	-	-	245,806	459,404 ^f	629,016 ^f
International					
Majors, all services	705,938	2,109,497	5,976,221 ^c	16,761,376 ^d	17,098,016 ^d
Nationals, all services	-	-	465,923	901,352 ^e	1,413,252 ^e
Large Regionals, all services	-	-	-	327,627 ^f	416,792 ^f
Total Certificated*	2,795,054	9,119,103	32,882,441	75,950,863	75,131,550
Operating Expenses (\$ thousands)					
Domestic					
Majors, all services	1,907,785	6,256,039	23,150,527 ^b	54,209,401 ^d	52,076,656 ^d
Nationals, all services	144,309	745,629	3,058,289	4,297,823 ^e	4,026,997 ^e
Large Regionals, all services	-	-	257,183	445,862 ^f	619,198 ^f
International					
Majors, all services	665,660	2,065,605	6,171,366 ^c	17,746,006 ^d	18,461,029 ^d
Nationals, all services	-	-	470,729	853,361 ^e	1,334,016 ^e
Large Regionals, all services	-	-	-	315,113 ^f	390,032 ^f
Total Certificated*	2,717,754	9,067,273	33,108,094	77,867,566	76,907,928
II. INVENTORY²					
Number of Carriers					
Total Domestic and International	55 ^g	39 ^g	72 ^g	62 ^g	60 ^g
Majors	-	-	12	12	10
Nationals	-	-	17	16	15
Regionals	-	-	43	34	35
Number of Aircraft Available for Service					
Total Domestic and International	2,211	2,564	2,818	4,727	4,580
Majors	-	-	2,071	3,854	3,782
Nationals	-	-	432	650	584
Regionals	-	-	315	223	214
Number of Employees					
Total Domestic and International	169,872	304,690	354,264	588,926	567,582
Majors	118,189	214,021	318,973	549,100	530,195
Nationals	12,470	24,913	29,922	32,077	28,004
Regionals	-	-	5,369	7,749	9,383
III. PERFORMANCE					
Aircraft Revenue-Miles (thousands)					
Domestic					
Certificated, all services*	858,451 ^h	2,067,598 ^h	2,523,375 ⁱ	3,963,263 ^j	3,854,416 ^j
Majors, all services*	716,961	1,778,065	2,113,669	3,547,339 ^k	3,426,230 ^k
Nationals, all services*	94,794	247,055	330,528	351,946 ^l	345,472 ^l
Large Regionals, all services*	-	-	56,995	60,542 ^m	78,949 ^m

AIR CARRIER PROFILE (page 2 of 4)

	1960 ¹	1970 ¹	1980 ¹	1990 ¹	1991 ¹
International					
Certificated, all services*	181,605 ^h	474,666 ^h	400,791 ⁿ	760,338 ^o	806,606 ^o
Majors, all services*	-	-	330,391	666,231 ^p	694,994 ^p
Nationals, all services*	-	-	66,499	48,812 ^q	63,708 ^q
Large Regionals, all services*	-	-	2,948	60,542 ^r	44,182 ^r
Medium Regionals, all services					
Domestic and International*	-	-	23,204	9,017 ^s	7,487 ^s
Total Certificated*	1,040,056	2,542,264	2,947,370	4,732,618	4,668,509
Aircraft Revenue-Hours					
Domestic					
Certificated, all services*	3,672,900	5,133,161	6,247,795 ⁱ	9,717,375 ^j	9,492,561 ^j
Majors, all services*	2,802,317	4,066,480	4,941,327	8,524,236 ^k	8,201,033 ^k
Nationals, all services*	606,146	908,935	919,187	1,016,491 ^l	1,033,046 ^l
Large Regionals, all services*	-	-	267,522	167,826 ^m	248,265 ^m
International					
Certificated, all services*	608,736	977,325	819,518 ⁿ	1,556,760 ^o	1,644,917 ^o
Majors, all services*	-	-	668,199	1,351,349 ^p	1,399,690 ^p
Nationals, all services*	-	-	140,239	101,533 ^q	132,317 ^q
Large Regionals, all services*	-	-	7,583	88,641 ^r	102,220 ^r
Medium Regionals, all services					
Domestic and International*	-	-	123,411	24,059 ^s	20,628 ^s
Total Certificated*	4,281,636	6,110,486	7,190,724	11,298,194	11,158,106
Revenue Passenger-Miles (thousands)					
Domestic					
Certificated, all services	31,098,944	108,441,978	204,367,599 ⁱ	345,872,950 ^j	338,085,364 ^j
Majors, all services	29,430,428	99,903,229	182,984,795	327,112,620 ^k	320,262,943 ^k
Nationals, all services	1,170,779	7,642,071	20,466,712	16,756,818 ^l	15,242,462 ^l
Large Regionals, all services	-	-	711,868	1,752,615 ^m	2,340,531 ^m
International					
Certificated, all services	8,950,672	39,675,312	63,354,387 ⁿ	126,362,697 ^o	125,211,017 ^o
Majors, all services	-	-	54,318,160	118,268,507 ^p	115,884,653 ^p
Nationals, all services	-	-	8,659,592	6,794,533 ^q	8,003,082 ^q
Large Regionals, all services	-	-	330,288	1,219,706 ^r	1,289,688 ^r
Medium Regionals, all services					
Domestic and International*	-	-	250,571	330,848 ^s	273,022 ^s
Total Certificated*	40,049,616	148,137,370	267,972,557	472,566,495	463,569,403
Revenue Passenger Enplanements (thousands)					
Domestic					
Certificated, all services*	56,352	153,662	275,182 ⁱ	428,767 ^j	417,419 ^j
Majors, all services*	48,678	122,866	223,237	393,927 ^k	382,704 ^k
Nationals, all services*	5,949	26,726	47,145	32,015 ^l	30,341 ^l
Large Regionals, all services*	-	-	3,748	2,566 ^m	4,110 ^m
International					
Certificated, all services*	5,904	16,620	26,514 ⁿ	46,126 ^o	43,783 ^o
Majors, all services*	-	-	23,949	42,207 ^p	39,406 ^p
Nationals, all services*	-	-	2,343	2,632 ^q	2,878 ^q
Large Regionals, all services*	-	-	149	1,246 ^r	1,472 ^r
Medium Regionals, all services					
Domestic and International*	-	-	1,125	300 ^s	296 ^s
Total Certificated*	62,256	169,922	302,821	475,193	461,498

AIR CARRIER PROFILE (page 3 of 4)

	1960 ¹	1970 ¹	1980 ¹	1990 ¹	1991 ¹
Revenue Passenger Load Factor (%)					
Domestic					
Certificated, scheduled services	58.5 ^h	48.9 ^h	58.0 ⁱ	60.4 ^j	61.2 ^j
Majors, scheduled services	59.5	49.3	58.1	60.6 ^k	61.4 ^k
Nationals, scheduled services	41.9	43.6	58.4	56.6 ^l	56.5 ^l
Large Regionals, scheduled services	-	-	47.7	48.7 ^m	53.2 ^m
International					
Certificated, scheduled services	62.2	53.0	62.8 ⁿ	69.1 ^o	67.3 ^o
Majors, scheduled services	-	-	62.8	69.1 ^p	67.2 ^p
Nationals, scheduled services	-	-	65.5	73.4 ^q	68.2 ^q
Large Regionals, scheduled services	-	-	73.9	66.5 ^r	68.6 ^r
Medium Regionals, all services	-	-	-	-	-
Domestic and International*	-	-	46.7	0.0 ^s	85.1 ^s
U.S. International Passenger Travel					
Total Passenger-Arrivals (thousands)					
Flag of Carrier:					
United States	1,332 ^t	5,531 ^t	10,031 ^u	19,145 ^u	18,910 ^u
Foreign	1,234	4,343	10,231	17,269	16,554
Total Passenger-Departures (thousands)					
Flag of Carrier:					
United States	1,200	4,949	9,369	17,628	17,530
Foreign	1,136	4,147	3,886	16,418	15,756
Total Revenue Ton-Miles (thousands) ^f					
Domestic					
Certificated, all services	3,732,949 ^h	13,876,802 ^h	24,964,907 ⁱ	43,651,162 ^j	42,668,248 ^j
Majors, all services	3,332,483	12,589,057	21,427,534	39,107,033 ^k	38,188,610 ^k
Nationals, all services	121,157	850,477	3,336,057	3,561,283 ^l	3,508,173 ^l
Large Regionals, all services	-	-	180,042	945,929 ^m	931,264 ^m
International					
Certificated, all services	1,291,336	6,308,701	9,689,067 ⁿ	19,975,915 ^o	19,811,099 ^o
Majors, all services	-	-	7,377,733	17,803,825 ^p	17,398,529 ^p
Nationals, all services	-	-	2,261,534	1,229,849 ^q	1,547,987 ^q
Large Regionals, all services	-	-	44,438	835,701 ^r	794,936 ^r
Medium Regionals, all services	-	-	-	-	-
Domestic and International*	-	-	28,178	143,457 ^s	109,848 ^s
Total Certificated*	5,024,285	20,185,503	34,682,153	63,770,534	62,589,195
Revenue Ton-Miles of Freight (thousands) [#]					
Domestic					
Certificated, all services	552,751	2,189,331	4,528,316 ⁱ	9,063,864 ^j	8,859,170 ^j
Majors, all services	321,176	1,809,996	3,129,087	6,395,767 ^k	6,162,315 ^k
Nationals, all services	3,850	53,558	1,289,510	1,885,600 ^l	1,983,926 ^l
Large Regionals, all services	-	-	108,864	770,670 ^m	697,211 ^m
International					
Certificated, all services	268,156	1,566,105	3,353,371 ⁿ	7,339,660 ^o	7,289,998 ^o
Majors, all services	-	-	1,945,660	5,976,973 ^p	5,810,064 ^p
Nationals, all services	-	-	1,395,575	550,409 ^q	747,679 ^q
Large Regionals, all services	-	-	11,409	713,733 ^r	665,967 ^r
Medium Regionals, all services	-	-	-	-	-
Domestic and International*	-	-	3,124	110,372 ^s	82,546 ^s
Total Certificated*	820,907	3,755,436	7,884,811	16,513,896	16,232,254

AIR CARRIER PROFILE (page 4 of 4)

	1960	1970	1980	1990	1991
Air Carrier Accidents					
Operating under 14 CFR 121 (airlines)					
Scheduled services	-	-	15 ^w	24 ^w	26 ^w
Nonscheduled services	-	-	4	2	1
Operating under 14 CFR 135					
Scheduled services (commuters)	-	-	38	15	22
Nonscheduled services (on-demand air taxis)	-	-	171	108	88
Total*	90 ^v	55 ^v	228	149	137
Fatal Air Carrier Accidents					
Operating under 14 CFR 121 (airlines)					
Scheduled services	-	-	0	6	4
Nonscheduled services	-	-	1	0	0
Operating under 14 CFR 135					
Scheduled services (commuters)	-	-	8	3	8
Nonscheduled services (on-demand air taxis)	-	-	46	28	26
Total*	17	8	55	37	38
Air Carrier Fatalities					
Operating under 14 CFR 121 (airlines)					
Scheduled services	-	-	0	39	50
Nonscheduled services	-	-	1	0	0
Operating under 14 CFR 135					
Scheduled services (commuters)	-	-	37	6	77
Nonscheduled services (on-demand air taxis)	-	-	105	49	73
Total*	499	146	143	94	200

* Data derived by addition/subtraction and may not appear directly in the data source.

[#] Total Revenue Ton-Miles includes Passenger, Freight, Express and Mail.

¹ Domestic encompasses operations within and between the 50 states of the United States, the District of Columbia, Puerto Rico and the Virgin Islands. It also encompasses Canadian and Mexican transborder operations. All other operations are considered International.

² Includes scheduled and nonscheduled (charter) operators. By Sec. 2 of the Airline Deregulation Act of 1978 "charter air carrier" and "charter air transportation" replaced supplemental air carriers and supplemental air transportation which were formerly Sec. 101(36) and (37) of the Act. The 24 pre-deregulation supplemental carriers now have scheduled service authority.

Source: The following data references are listed in Appendix A, pp. A-9, A-10.

Source	Reference Number/Location	Source	Reference Number/Location
a	8) pp. 69, 71	l	34) pp. 54/61
b	7) pp. 3/28, 44	m	34) pp. 90/99
c	7) pp. 4/28, 44	n	6) pp. 3/6/47/85/115
d	35) p. 3	o	34) p. 3
e	35) pp. 34, 37	p	34) p. 6
f	35) pp. 48, 50	q	34) pp. 55/62
g	36) personal communication	r	34) pp. 91/100
h	8) Table 2, 4, 7, 13	s	34) pp. 143/165
i	6) pp. 2/5/46/84	t	25) p. 22
j	34) p. 2	u	38) Tables IIa and IIb
k	34) p. 5	v	15) personal communication
		w	15) Tables 2/3/4/5/6

GENERAL AVIATION PROFILE (page 1 of 2)

	1960	1970	1980	1990	1991
I. FINANCIAL					
Expenditures (\$ millions)					
Aircraft	202 ^a	339 ^a	2,853 ^a	3,518 ^a	3,423 ^a
Operating Costs	693	1,696	5,200	6,754	7,101
Total	895	2,035	8,053	10,272	10,524
II. INVENTORY					
Number of Active Aircraft					
Corporate	-	6,835 ^b	14,860 ^b	10,906 ^b	10,033 ^b
Business	-	26,900	49,391	35,496	31,583
Commuter Carrier	-	-	944	1,242	738
Instructional	-	10,727	14,862	19,889	17,901
Personal	-	65,398	96,222	120,636	115,069
Aerial Application	-	5,455	7,294	6,687	7,006
Aerial Observation	-	-	-	5,302	5,045
Air Taxi	-	4,571	7,615	6,188	5,501
Other Work ^f	-	2,054	2,813	1,525	1,676
Other	-	8,249	17,045	4,358	3,922
Total	76,549 ^b	131,743	211,046	212,229	198,474
III. PERFORMANCE					
Number of Hours Flown (thousands)					
Corporate	-	-	5,332 ^c	3,155 ^c	2,617 ^c
Business	5,699 ^c	7,204 ^c	8,434	4,784	4,154
Commuter Carrier	-	-	961	1,444	570
Instructional	1,828	6,791	5,748	7,847	6,141
Personal	3,172	6,896	8,894	10,048	9,685
Aerial Application	-	-	2,044	2,028	1,911
Aerial Observation	-	-	-	1,891	1,797
Air Taxi	-	-	3,535	2,436	2,241
Other Work ^f	-	-	1,053	619	471
Other	2,422	5,139	4,925	514	473
Total	13,121	26,030	40,926	34,767	30,067
Number of Fatalities [*]					
Corporate	-	28 ^d	66 ^d	21 ^d	22 ^d
Business	-	148	126	81	83
Instructional	-	93	73	60	58
Personal	-	726	803	500	526
Aerial Application	-	41	32	17	12
Other	-	174	152	96	72
Total	787 ^d	1,310	1,252	763	746
Number of Accidents					
Fatal	429	641	618 ^e	445 ^e	414 ^e
Total	4,793	4,712	3,590	2,218	2,143
Accident Rate per 100,000 Aircraft Hours Flown					
Fatal	3.3	2.5	1.7	1.6	1.5
Total	36.5	18.1	9.9	7.8	7.1

GENERAL AVIATION PROFILE (page 2 of 2)

* Figures are preliminary for 1990 and 1991 and do not equal total.

In 1960, 1970, 1980, classified as "Industrial."

Source: The following data references are listed in Appendix A, p. A-9.

<u>Source</u>	<u>Reference Number/Location</u>
a	9) p. 44
b	27) Table 3.1
c	27) Table 3.2
d	14) personal communication
e	15) Table 7

HIGHWAY PROFILE (page 1 of 3)

	1960	1970	1980	1990	1991
I. FINANCIAL					
Government Receipts (\$ millions)					
Federal					
Highway Trust Fund	2,827 ^a	6,144 ^a	9,830 ^b	13,303 ^b	16,550 ^b
Other*	205	-	2,553	1,205	1,372
Total Federal	3,063	6,144	9,830	14,508	17,922
State and Local					
State and D.C.	6,055	11,737	19,666	39,381	41,217
Local*	2,367	3,866	10,219	20,030	22,021
Total State and Local*	8,422	15,603	29,885	59,411	63,238
Total	11,485	21,747	39,715	73,919	81,160
Government Expenditures (\$ millions)					
Federal					
Highway Trust Fund	202 ^c	431	906	431	363
Other*	-	-	-	315	331
Total Federal	202	431	906	746	694
State and Local					
State and D.C.	7,125	14,100	25,936	45,609	47,562
Local*	3,435	6,304	14,953	28,530	30,004
Total State and Local*	10,560	20,404	40,889	74,139	77,566
Total	10,762	20,835	41,795	74,885	78,260
Highway User Tax Revenues (\$ millions)					
Motor Fuel Tax	3,374	6,433	9,485 ^e	19,708 ^e	21,116 ^e
Other Motor Fuel Receipts ¹	22	44	92	202	202
Motor Vehicle Registration Fees	1,514 ^f	2,873 ^f	5,172 ^g	10,257 ^g	10,670 ^g
Other Motor Vehicle Fees ²	235	577	1,490	3,353	3,458
Motor Carrier Taxes ³	110	176	323	695	727
Miscellaneous Fees	68	181	615	1,761	1,971
Total	5,323	10,284	17,177	35,976	38,144
II. INVENTORY					
Rural/Urban Mileage by Jurisdiction					
Rural Mileage					
Under State Control [†]	658,896 ^h	707,002 ^h	701,846 ⁱ	702,562 ⁱ	702,615 ⁱ
Under Federal Control	111,912	187,696	262,010	178,196	182,140
Under Local Control	2,345,317	2,274,714	2,269,770	2,242,030	2,254,680
County Roads	1,742,404	1,732,981	1,686,693	1,617,051	1,623,544
Town and Township Roads	538,651	510,174	507,856	437,493	437,945
Other Local Roads	64,262	31,559	75,221	187,486	193,191
Total Rural Mileage	3,116,125	3,169,412	3,233,626	3,122,788	3,139,435
Urban Mileage					
Under State Control	50,158	74,103	79,359	95,790	95,873
Under Federal Control [†]	-	-	753	1,024	1,030
Under Local Control					
County Roads	-	-	27,515	95,985	97,849
Town and Township Roads	-	-	19,474	42,772	42,997
Other Local Roads	379,410	486,567	496,131	521,792	512,115
Total Urban Mileage	429,568	560,670	623,232	757,363	749,864
Total Rural and Urban Mileage	3,545,693	3,730,082	3,856,858	3,880,151	3,889,299

HIGHWAY PROFILE (page 2 of 3)

	1960	1970	1980	1990	1991
Rural/Urban Mileage by Functional System					
Rural Mileage					
Interstate	-	-	31,997 ^j	33,547 ^j	33,677 ^j
Other Principal Arterial	-	-	82,732	83,802	85,729
Minor Arterial	-	-	149,089	144,735	142,866
Major Collector	-	-	439,050	436,365	436,737
Minor Collector	-	-	299,557	293,912	293,500
Local	-	-	2,231,201	2,130,427	2,146,926
Total Rural Mileage	3,116,125 ^j	3,169,412 ^j	3,233,626	3,122,788	3,139,435
Urban Mileage					
Interstate	-	-	9,219	11,527	11,603
Other Freeways and Expressways	-	-	6,713	7,670	7,714
Other Principal Arterial	-	-	44,338	51,987	52,349
Minor Arterial	-	-	66,581	74,656	74,979
Collector	-	-	68,213	78,248	77,097
Local	-	-	428,168	533,275	526,122
Total Urban Mileage	429,568	560,670	623,232	757,363	749,864
Total Rural and Urban Mileage	3,545,693	3,730,082	3,856,858	3,880,151	3,889,299
U.S. Roads and Streets					
Surfaced Mileage					
State Control	667,214 ^k	747,658 ^k	753,000 ^l	619,000 ^l	620,000 ^l
County and Local Control	1,862,368	2,143,820	2,605,000	2,899,000	2,940,000
Total	2,556,970	2,946,463	3,358,000	3,518,000	3,560,000
Percent Surfaced	72.1	78.9	84.9	90.7	91.5
Non-Surfaced Mileage					
State Control	41,840	33,447	28,000	1,000	1,000
County and Local Control	862,359	617,461	569,000	361,000	329,000
Total	988,723	783,619	597,000	362,000	330,000
Total Mileage					
State Control	709,054	781,105	781,000	620,000	621,000
County and Local Control	2,724,727	2,761,281	3,174,000	3,260,000	3,269,000
Total	3,545,693	3,730,082	3,955,000	3,880,000	3,889,000
Number of Employees					
Highways - State & Local Govt.	540,000 ^m	607,000 ^m	532,000 ^m	569,000 ^m	580,000 ^m
Highway and Street Construction	294,000 ⁿ	331,000 ⁿ	268,400 ⁿ	239,000 ⁿ	219,300 ⁿ
Intercity & Rural Bus Transportation ⁴	40,500	43,000	37,900	26,300	24,500
III. PERFORMANCE					
Vehicle-Miles of Travel by Highway Class (millions)					
Rural					
Interstate	288,483 ^o	79,516 ^o	134,513 ^p	200,173 ^p	205,011 ^p
Other Principal Arterial	-	230,590	135,527	175,133	177,425
Minor Arterial	-	-	132,409	155,733	157,424
Major Collector	-	-	150,575	190,152	194,006
Minor Collector	-	-	40,226	49,948	51,601
Local	98,777	229,366	84,236	97,379	98,154
Total Rural	387,260	539,472	677,486	868,878	883,621

HIGHWAY PROFILE (page 3 of 3)

	1960	1970	1980	1990	1991
Urban					
Interstate	-	81,532 ^o	159,347 ^p	278,901 ^p	285,325 ^p
Other Freeways and Expressways	-	488,720	88,328	127,465	128,242
Other Principal Arterial	-	-	227,123	335,543	338,987
Minor Arterial	-	-	172,356	236,225	240,402
Collector	-	-	82,623	106,297	107,272
Local	331,585	-	123,146	191,053	188,365
Total Urban	331,585	570,252	852,923	1,275,484	1,288,593
Total Rural and Urban	718,845	1,109,724	1,530,409	2,144,362	2,172,214
Highway Demand for Petroleum (thousand barrels)					
Motor Fuel	1,373,648 ^a	2,198,290 ^a	2,737,139 ^a	3,113,695 ^a	3,062,482 ^a
Asphalt Paving Products	80,704	129,769	123,542	175,963	161,416
Road Oils	6,475	10,342	1,498	880	811
Total	1,460,827	2,338,401	2,862,179	3,290,530	3,224,709

* Figures obtained by addition/subtraction and may not appear directly in data source.

† Mileage in Federal parks, forests, and reservations that are not a part of the state and local highway system.

¹ Includes distributors and dealers licenses, inspection fees, fines and penalties, and miscellaneous receipts.

² Includes drivers licenses, title fees, special titling taxes, fines and penalties, estimated service charges and local collections.

³ Includes gross receipt taxes; mileage, ton-mile and passenger-mile taxes; special license fees and franchise taxes; and certificate or permit fees.

⁴ 1980 figure - Intercity Highway Transportation.

Source: The following data references are listed in Appendix A, pp. A-9, A-10.

Source	Reference Number/Location
a	29) HF-211
b	28) Table HF-10
c	29) HF-212
d	29) MF-201
e	28) Table MF-1
f	29) MV-202
g	28) Table MV-2
h	29) M-203
i	28) Table HM-10
j	28) Table HM-20
k	28) Table M-2
l	12) p. 84
m	9) p. 61
n	26) SIC 161-413
o	29) VM-201
p	28) Table VM-2
q	9) p. 57

AUTOMOBILE PROFILE (page 1 of 3)

	1960	1970	1980	1990	1991
I. FINANCIAL					
Personal Auto Expenditures (\$ millions)					
New and Used Cars*	20,237 ^a	32,668 ^a	61,300 ^a	130,355 ^a	115,282 ^a
Tires, Tubes, Accessories and Parts	2,768	5,396	16,684	22,483	23,006
Gasoline and Oil	14,414	29,329	83,721	108,471	105,459
Tolls	362	756	1,061	2,024	2,021
Insurance Premiums less Claims Paid	2,313	4,335	9,383	18,066	21,826
Repair, Greasing, Washing,					
Parking, Storage, Rental & Leasing	6,115	13,233	32,327	82,538	83,678
Auto Registration Fees	863 ^b	1,668 ^b	2,892 ^b	6,054 ^b	6,328 ^b
Driver's License Fees	119	222	370	638	702
Total*	47,191	92,270	214,399	370,629	358,302
Taxi Expenditures (\$ millions)	858 ^a	1,411 ^a	2,857 ^a	3,209 ^a	3,358 ^a
Business Auto Expenditures (\$ millions)	-	-	20,771 ^c	55,083 ^c	59,839 ^c
Government Auto Expenditures (\$ millions)	-	-	766	1,861	1,369
Total Business/Government					
Auto Expenditures*	-	-	21,537	56,944	61,208
II. INVENTORY					
Number of Vehicle Registrations					
Passenger Cars and Taxis	61,882,304 ^d	89,243,557 ^d	121,600,843 ^d	143,453,040 ^e	142,955,623 ^e
Motorcycles	575,497	2,824,098	5,693,940	4,259,462	4,177,037
Motor Vehicle Licensed					
Drivers (thousands)	87,253 ^f	111,543 ^f	145,299 ^f	167,015 ^f	168,995 ^f
Number of Employees					
Taxicabs	120,700 ^g	106,400 ^g	52,500 ^g	32,600 ^g	31,800 ^g
Automotive Dealers and Service Stations	1,267,200 ^h	1,617,400 ^h	1,688,500 ^h	2,067,500 ^h	1,996,000 ^h
New and Used Car Dealers	658,100	763,200	786,600	926,400	886,400
Motor Vehicles, Parts and Supplies	313,000 ⁱ	351,300 ⁱ	417,500 ⁱ	458,400 ⁱ	445,700 ⁱ
Auto Repair, Services, and Parking	251,000 ^j	284,000 ^j	570,900 ^j	916,400 ^j	882,400 ^j
III. PERFORMANCE					
Vehicle-Miles (millions) ¹					
Rural Highway					
Interstate Rural	-	62,342 ^k	89,488 ^k	129,960 ^e	134,631 ^e
Other Arterial Rural	-	182,213	180,857	217,144	221,034
Other Rural	-	179,533	180,314	218,256	224,065
All Rural	303,283 ^k	424,088	450,659	565,360	579,730
Urban Highway ²					
Interstate Urban	-	69,369	124,480	209,429	214,314
Other Urban	-	426,222	546,671	747,952	748,802
All Urban	284,800	495,591	671,151	957,381	963,116
Total Rural and Urban Highway	588,083	919,679	1,121,810	1,522,741	1,542,846
Vehicle-Miles (millions)					
Passenger Cars and Taxis	588,083 ^d	916,700 ^d	1,111,596 ^d	1,513,184	1,533,668
Motorcycles	-	2,979	10,214	9,557	9,178
Total	588,083	919,679	1,121,810	1,522,741	1,542,846
Passenger-Miles (millions)					
Total Travel, Passenger Cars and Taxis	1,293,783 ^l	1,833,400 ^l	2,000,872 ^l	2,451,358 ^l	2,484,542 ^l
Total Travel, Motorcycles	-	3,694	13,278	13,093	12,574
Average Miles Traveled per Vehicle					
Passenger Cars and Taxis	9,446 ^d	10,272 ^d	9,141 ^d	10,548 ^e	10,728 ^e
Motorcycles	-	1,055	1,794	2,244	2,197
Fuel Consumed (million gallons)					
Passenger Cars and Taxis	41,169	67,820	71,883	71,989	70,727
Motorcycles	-	60	204	191	184

AUTOMOBILE PROFILE (page 2 of 3)

	1960	1970	1980	1990	1991
Average Annual Fuel Consumption per Vehicle (gallons)					
Passenger Cars and Taxis	661 ^d	760 ^d	591 ^d	502 ^e	495 ^e
Motorcycles	-	21	36	45	44
Average Miles Traveled Per Gallon of Fuel Consumed					
Passenger Cars and Taxis	14.3	13.5	15.5	21.0	21.7
Motorcycles	50	50	50	50	50
Number of Vehicles in All Accidents					
Passenger Cars	16,000,000 ^m	23,500,000 ^m	22,800,000 ^m	14,320,000 ^m	13,720,000 ^m
Taxis	150,000	190,000	230,000	25,000	-
Motorcycles	100,000	275,000	510,000	160,000	230,000
Number of Vehicles in Fatal Accidents					
Passenger Cars	37,400	52,000	39,059 ⁿ	34,085 ⁿ	31,234 ⁿ
Taxis	150	210	81	78	73
Motorcycles	600	2,200	5,194	3,276	2,832
Number of Occupant & Non Occupant Fatalities					
Motor Vehicles	38,137	54,633	51,091	44,599	41,508
Passenger Cars	24,800	34,800	27,449	24,092	22,385
Taxis	-	-	23	22	26
Motorcycles, total	731	2,330	5,144	3,244	2,806
Motorcycles	731	2,330	4,961	3,129	2,702
Mopeds	-	-	118	49	47
Other and Unknown	-	-	65	66	57
Bicycles ³	460	780	965	859	843
Pedestrians ³	7,850	9,900	8,070	6,482	5,801
Occupant Fatality Rate					
Per 100 Million Vehicle-Miles					
Passenger Cars	5.3	3.9	2.5	1.6	1.5
Motorcycles	-	22.5	50.4	33.9	30.6
Per 10,000 Registered Vehicles					
Passenger Cars	5.1	3.9	2.3	1.7	1.6
Motorcycles	-	8.1	9.0	7.6	6.7
Vehicle Involvement Rate					
Per 100 Million Vehicle-Miles					
Passenger Cars	-	5.6	3.5	2.3	2.0
Motorcycles	-	22.9	50.4	34.3	30.9
Per 10,000 Registered Vehicles					
Passenger Cars	-	5.6	3.2	23.8	21.8
Motorcycles	-	8.2	9.0	7.7	6.8

AUTOMOBILE PROFILE (page 3 of 3)

- * Figures obtained by addition/subtraction and may not appear directly in data source.
- ¹ Includes passenger cars, taxis, and motorcycles.
- ² Urban consists of travel on all roads and streets in urban places of 5,000 or greater population.
- ³ Involvement only with motor vehicle.

Source: The following data references are listed in Appendix A, pp. A-9, A-10.

<u>Source</u>	<u>Reference Number/Location</u>
a	22) Table 2.4
b	28) Table MV-2
c	21) personal communication
d	29) Table VM-201A
e	28) Table VM-1
f	28) Table DL-22
g	26) SIC 412
h	26) SIC 55/551
i	26) SIC 501
j	26) SIC 75
k	29) Table VM-201
l	28) estimated using vehicle occupancy rates from FHWA's Nationwide Personal Transportation Surveys and vehicle-miles from reference source.
m	13) p. 64
n	32) personal communication

BUS PROFILE (page 1 of 2)

	1960	1970	1980	1990	1991
I. FINANCIAL					
Expenditures (\$ thousands)					
School Bus	486,000 ^a	1,219,000 ^a	3,833,000 ^a	7,605,000 ^a	7,879,000 ^a
Operating Revenues (\$ thousands)					
Intercity Bus, total	559,000	799,000	1,709,000	1,750,000	1,875,000
Intercity Bus, Class I	463,100 ^b	721,700 ^b	1,397,378 ^b	943,268 ^b	980,060 ^b
Operating Expenses (\$ thousands)					
Intercity Bus, total	494,800	812,200	1,810,900	2,041,088	1,979,320
Intercity Bus, Class I	405,400	639,000	1,318,372	1,026,213	967,018
II. INVENTORY					
Number of Operating Companies					
Intercity Bus, total	1,150 ^c	1,000 ^c	1,283 ^c	3,925 ^c	4,204 ^c
Intercity Bus, Class I	143 ^b	71 ^b	61 ^b	21 ^b	31 ^b
Number of Vehicles					
Intercity Bus, total	20,974	22,000	21,400	19,491	20,855
Intercity Bus, Class I	11,093	10,158	8,427	6,502	6,311
School Bus	196,000	288,750	380,000	380,000	350,000
Number of Employees of Operating Companies					
Intercity Bus, total	45,000 ^d	49,500 ^d	38,000 ^d	26,300 ^d	24,500 ^d
Intercity Bus, Class I	40,500 ^b	34,383 ^b	29,723 ^b	10,060 ^b	11,876 ^b
School Bus	-	-	79,900 ^h	112,300 ^h	114,500 ^h
Miles of Highway Served					
Intercity Bus, total	265,000 ^e	267,000 ^e	279,000 ^e	213,000 ^e	-
Intercity Bus, Class I	193,000	194,000	193,000	146,000	-
III. PERFORMANCE					
Vehicle-Miles (millions)					
All Buses					
Rural Highway					
Interstate Rural	-	339 ^e	533 ^e	567 ^f	567 ^f
Other Arterial Rural	-	944	991	995	996
Other Rural	-	1,266	1,511	1,885	1,886
All Rural	2,255 ^e	2,549	3,035	3,447	3,449
Urban Highway ^l					
Interstate Urban	-	277	560	453	457
Other Urban	-	1,718	2,464	1,819	1,837
All Urban	2,098	1,995	3,024	2,272	2,294
Total Rural and Urban Highway	4,353	4,544	6,059	5,719	5,743
School Bus	1,481 ^g	2,100 ^g	3,000 ^g	3,800 ^g	4,300 ^g
Revenue Passenger-Miles (millions)					
Intercity Bus, total	19,300 ^a	25,300 ^a	27,400 ^a	23,000 ^a	23,500 ^a
Intercity Bus, Class I	13,116 ^c	14,190 ^c	16,500 ^c	13,820 ^c	14,124 ^c
Number of Revenue Passengers (thousands)					
Intercity Bus, total	366,000 ^a	401,000 ^a	370,000 ^a	334,000 ^a	337,000 ^a
Intercity Bus, Class I	267,000 ^c	174,000 ^c	130,000 ^c	104,699 ^c	103,129 ^c

BUS PROFILE (page 2 of 2)

	1960	1970	1980	1990	1991
Average Passenger Trip Length (miles)					
Intercity Bus, total	78.3 ^a	63.2 ^a	74.1 ^a	71.4 ^a	69.7 ^a
Intercity Bus, Class I	-	102.9	125.0	138.0	143.0
Average Miles Traveled per Vehicle					
Commercial	37,789 ^e	32,591 ^f	32,765 ^f	38,499 ^c	39,038 ^c
School and Nonrevenue Bus	7,556	7,274	7,592	10,000	12,286
All Buses	16,004	12,035 ^e	11,458 ^e	9,121 ^f	9,097 ^f
Fuel Consumed (million gallons)					
Commercial	618	644 ^f	696 ^f	723 ^c	738 ^c
School and Nonrevenue Bus	209	300	380	472	533
All Buses	827	820 ^e	1,018 ^e	895 ^f	864 ^f
Average Annual Fuel Consumption per Vehicle					
Commercial	8,132	7,132 ^f	6,516 ^f	9,591 ^c	9,939 ^c
School and Nonrevenue Bus	1,066	1,039	994	1,242	1,524
All Buses	3,040	2,172 ^e	1,926 ^e	1,428 ^f	1,369 ^f
Average Miles Traveled per Gallon of Fuel Consumed					
Commercial	4.7	4.6 ^f	5.0 ^f	4.4 ^c	4.4 ^c
School and Nonrevenue Bus	7.1	7.0	7.6	8.1	8.1
All Buses	5.3	5.5 ^e	6.0 ^e	6.4 ^f	6.6 ^f
Average Revenue per Passenger-Mile (cents)	2.7 ^a	3.6 ^a	7.3 ^a	11.6 ^a	11.3 ^a
Number of Fatalities					
School Bus-related	-	-	150 ^h	115 ^h	134 ^h
School Bus Occupants	-	-	14	11	17
Other Vehicle Occupants	-	-	96	64	86
Non-Occupants	-	-	53	40	31
Occupant Fatalities					
All Buses	-	-	46	32	31
School Buses	-	-	14	13	10
Cross Country Buses	-	-	23	2	6
Transit Buses	-	-	6	3	3
Other and Unknown	-	-	3	14	12
Fatalities in Vehicular Accidents ²					
All Buses	-	-	390	340	306
Occupant Fatality Rate					
Per 100 Million Vehicle-Miles					
All Buses	-	-	0.8	0.6	0.5
Per 10,000 Registered Vehicles					
All Buses	-	-	0.9	5.1	4.9
Vehicle Involvement Rate					
Per 100 Million Vehicle-Miles					
All Buses	-	-	5.4	5.0	4.8
Per 10,000 Registered Vehicles					
All Buses	-	-	6.2	4.6	4.4

¹ Urban consists of travel on all roads and streets in urban places of 5,000 or greater population.

² Includes all fatalities in the accident in which the vehicle types listed were involved.

Source: The following data references are listed in Appendix A, pp. A-9, A-10.

Source	Reference Number/Location
a	9) pp. 42, 47, 48
b	11) Tables 6,7
c	16) personal communication.
d	26) SIC 415/413

Source	Reference Number/Location
e	29) Table VM-201A
f	28) Table VM-1
g	13) p.71
h	32) personal communication

TRUCK PROFILE (page 1 of 3)

	1960	1970	1980	1990	1991
I. FINANCIAL					
Revenues (\$ millions)					
Local	14,289 ^a	28,819 ^a	60,545 ^a	108,350 ^a	110,500 ^a
Intercity, ICC-authorized	7,214	14,585	43,000	75,500	78,300
Non-ICC-authorized	10,744	18,968	51,551	86,800	89,100
Operating Revenues of Class I Intercity Motor Carriers of Property (\$ millions)					
Freight, Intercity, Common Carriers	4,384 ^b	10,147 ^b	26,691 ^b	36,974 ^b	38,168 ^b
Freight, Intercity, Contract Carriers	239	332	1,139	5,212	5,671
Freight, Local Cartage	51	458	340	792	589
Trans. for other Classes I and II Carriers	48	91	187	186	155
Others	42	108	1,981	3,556	3,234
Total	4,764	11,137	30,338	46,710	47,797
Operating Expenses of Class I Intercity Motor Carriers of Property (\$ millions)	4,645	10,763	29,012	44,827	45,975
II. INVENTORY					
Number of Truck Registrations					
Private and Commercial	11,360,506 ^c	17,789,980 ^c	32,238,223 ^c	42,731,738 ^c	43,013,754 ^c
Federal	86,229	142,498	209,101	276,293	268,824
State, County, Municipal	498,742	815,943	1,189,917	1,470,817	1,502,455
Total	11,914,000	18,748,421	33,637,241	44,478,848	44,785,033
Number of Recreational Vehicles					
Motorized Homes	93,321 ^d	30,300 ^d	99,900 ^d	226,500 ^d	172,600 ^d
Travel Trailers	41,964	138,000	52,000	80,400	77,600
Folding Camping Trailers	8,272	116,100	24,500	30,700	33,900
Truck Campers	23,703	95,900	5,000	9,700	9,600
Total	167,260	380,300	181,400	354,500	300,500
Number of Employees					
Trucking and Truck Terminals	770,000 ^e	998,500 ^e	1,189,000 ^e	1,534,000 ^e	1,609,000 ^e
Truck Drivers and Deliverymen	1,418,000 ^a	1,356,000 ^a	1,931,000 ^a	2,189,000 ^a	2,148,000 ^a
Number of Employees, Class I Intercity Motor Carriers of Property	302,626 ^b	500,445 ^b	471,458 ^b	607,098 ^b	610,323 ^b
Number of Companies, Class I Intercity Motor Carriers of Property	935	1,376	835	728	677
III. PERFORMANCE					
Vehicle-Miles (millions)					
Rural Highway					
Interstate Rural	-	16,835 ^f	45,063 ^f	69,646 ^g	69,813 ^g
Other Arterial Rural	-	47,433	80,926	112,727	112,819
Other Rural	-	48,567	92,347	117,698	117,810
All Rural	81,722 ^f	112,835	218,336	300,071	300,442
Urban Highway ¹					
Interstate Urban	-	11,886	36,202	69,019	70,554
Other Urban	-	60,780	144,888	246,812	252,629
All Urban	44,687	72,666	181,090	315,831	323,183
Total Rural and Urban Highway	126,409	185,501	399,426	615,902	623,625

TRUCK PROFILE (page 2 of 3)

	1960	1970	1980	1990	1991
Vehicle-Miles					
Single-Unit Trucks	97,930 ^h	123,286 ^h	290,935 ^h	466,092 ^g	472,885 ^g
Other Single-Unit Trucks	-	27,081	39,813	53,443	53,791
Combination Trucks	28,479	35,134	68,678	96,367	96,949
All Trucks	126,409	185,501	399,426	615,902	623,625
Average Miles Traveled per Vehicle					
Single-Unit Trucks*	-	8,676	10,437	11,993	12,147
Other Single-Unit Trucks	-	7,356	9,103	12,595	12,656
Combination Trucks	-	38,819	48,472	59,807	60,429
All Trucks	10,583	9,869	11,864	13,773	13,925
Ton-Miles (millions)					
Inter-city	285,483 ^a	412,000 ^a	555,000 ^a	735,000 ^a	758,000 ^a
Fuel Consumed (million gallons)					
Single-Unit Trucks*	-	12,313 ^h	23,594 ^h	33,937 ^g	32,547 ^g
Other Single-Unit Trucks	-	3,968	5,557	7,294	7,137
Combination Trucks	-	7,348	12,703	17,469	17,165
All Trucks	15,882	23,630	41,854	57,700	56,849
Average Fuel Consumption per Vehicle (gallons)					
Single-Unit Trucks*	-	866	846	847	836
Other Single-Unit Trucks	-	1,078	1,271	1,719	1,679
Combination Trucks	-	8,119	8,966	10,841	10,699
All Trucks	1,330	1,257	1,243	1,290	1,269
Average Miles Traveled per Gallon of Fuel Consumed					
Single-Unit Trucks*	-	10.01	12.33	14.15	14.53
Other Single-Unit Trucks	-	6.82	7.16	7.33	7.54
Combination Trucks	-	4.78	5.41	5.52	5.65
All Trucks	7.96	7.85	9.54	10.67	10.97
Passenger-Miles ²					
Single-Unit Trucks*	156,688 ⁱ	192,326 ⁱ	439,312 ⁱ	685,155 ⁱ	695,141 ⁱ
Other Single-Unit Trucks	-	27,081	39,813	53,443	53,791
Combination Trucks	28,479	35,134	68,678	96,367	96,949
Taxes Assignable to Operation (\$ millions)					
State Highway-User Taxes	1,709 ^d	3,429 ^d	6,731 ^d	12,691 ^d	11,786 ^d
Federal Highway-User Taxes	1,121	2,202	3,157	6,665	7,858
Total Highway-User Taxes	2,830	5,631	9,888	19,356	19,644
Average Length of Haul (statute miles)					
Class I Inter-city Common Motor Carriers	272	263 ^a	490 ^a	571 ^a	589 ^a
Total Fatalities, Motor Carriers of Property	-	1,367 ^j	2,528 ^j	3,309 ^j	936 ^j
Total Accidents	-	40,233	31,389	35,885	34,405
Total Injuries	-	18,122	27,149	34,348	32,889
Property Damage (\$ thousands)	-	-	311,191	507,330	479,813
Occupant Fatalities					
Light Trucks	-	-	7,486 ^k	8,601 ^k	8,391 ^k
Medium Trucks	-	-	306	134	115
Heavy Trucks	-	-	956	571	546
All Trucks	-	-	8,748	9,306	9,052
Occupant Fatality Rate Per 100 Million Vehicle-Miles					
Single-Unit Trucks*	-	-	2.4	1.7	1.6
Combination Trucks	-	-	1.3	0.5	0.5
All Trucks	-	-	2.2	1.5	1.4

TRUCK PROFILE (page 3 of 3)

	1960	1970	1980	1990	1991
Per 10,000 Registered Vehicles					
Single-Unit Trucks*	-	-	2.4 ^k	2.0 ^k	2.0 ^k
Combination Trucks	-	-	6.4	3.2	3.1
All Trucks	-	-	2.6	2.1	2.0
Vehicle Involvement Rate					
Per 100 Million Vehicle-Miles					
Single-Unit Trucks*	-	-	4.3	3.2	3.0
Combination Trucks	-	-	5.8	3.9	3.4
All Trucks	-	-	4.5	3.3	3.1
Per 10,000 Registered Vehicles					
Single-Unit Trucks*	-	-	4.4	3.9	3.7
Combination Trucks	-	-	28.0	23.4	20.3
All Trucks	-	-	5.4	4.6	4.3

* 2-axle, 4-tire trucks

¹ Urban consists of travel on all roads and streets in urban places of 5,000 or greater population.

Source: The following data references are listed in Appendix A, pp. A-9, A-10.

References	
Source	Number/Location
a	9) pp. 42, 47, 48
b	11) Appendix E
c	28) Table MV-9
d	12) pp. 12,80
e	26) SIC 421, 3
f	29) Table VM-201
g	28) Table VM-1
h	29) Table V-201A
i	28) Estimated using vehicle occupancy rates from FHWA's Nationwide Personal Transportation Surveys and vehicle-miles from reference source.
j	31) personal communication
k	32) personal communication

LOCAL TRANSIT PROFILE (page 1 of 2)

	1960	1970	1980	1990	1991
I. FINANCIAL					
Operating Revenues (\$ thousands)					
Passenger	1,335,000 ^a	1,639,000 ^a	2,556,800 ^b	5,890,800 ^b	6,064,000 ^b
Other	72,000	68,000	248,300	895,000	954,300
Total Operating Revenues	1,407,000	1,707,000	2,805,100	6,785,800	7,018,300
Operating Assistance					
State & Local	-	-	2,611,200	8,297,400	8,846,900
Federal	-	-	1,093,900	970,000	945,000
Total Operating Assistance	-	-	3,705,100	9,267,400	9,791,900
Total Revenues	1,407,000	1,707,000	6,510,200	16,053,200	16,810,200
Operating Expenses (\$ thousands)					
Vehicle Operations	-	-	3,248,200 ^d	6,653,300 ^d	6,833,800 ^d
Vehicle Maintenance	-	-	1,274,300	3,038,800	3,043,100
Nonvehicle Maintenance	-	-	499,700	1,592,000	1,611,300
General Administration	-	-	1,224,300	3,449,900	3,622,400
Purchased Transportation	-	-	*	1,008,100	1,674,900
Total Operating Expenses	1,376,500 ^c	1,995,600 ^c	6,246,500	15,742,100	16,785,500
Depreciation and Amortization	-	-	277,600	1,593,100	1,789,100
Other Reconciling Items	-	-	186,500	643,900	1,042,600
Total Expenses	1,376,500 ^c	1,995,600 ^c	6,710,600	17,979,100	19,617,200
II. INVENTORY					
Number of Systems					
Motor Bus	1,236 ^e	1,075 ^e	1,022 ^e	2,685 ^e	2,690 ^e
Heavy Rail	31	15	11	12	12
Light Rail	~	~	9	17	18
Trolley Bus	19	6	5	5	5
Demand Response	-	-	-	3,193	3,894
Ferryboat	-	-	16	27	27
Commuter Rail	-	-	18	14	15
Other**	-	-	5	35	38
Total ^f	1,286	1,096	1,055	5,078	5,085
Number of Vehicles					
Motor Bus	49,600 ^f	49,700 ^g	59,411 ^g	58,714 ^g	57,865 ^g
Heavy Rail	9,010	9,286	9,641	10,419	10,170
Light Rail	2,856	1,262	1,013	913	1,058
Trolley Bus	3,826	1,050	823	832	919
Demand Response	-	-	-	16,471	17,222
Ferryboat	-	-	-	108	97
Commuter Rail	-	-	4,500	4,415	4,550
Other**	-	-	-	1,089	1,351
Total	65,292	61,298	75,388	92,961	93,232
Number of Employees					
Motor Bus	121,300 ^h	101,598 ^h	-	162,189 ⁱ	165,347 ⁱ
Heavy Rail	35,100	36,442	-	46,102	47,102
Light Rail	+	+	-	4,066	4,190
Trolley Bus	+	+	-	1,925	1,826
Demand Response	-	-	-	22,740	27,735
Ferryboat	-	-	-	2,813	2,697
Commuter Rail	-	-	-	21,443	21,387
Other**	-	-	-	898	1,244
Total	156,400	138,040	189,300 ^h	262,176	271,528

LOCAL TRANSIT PROFILE (page 2 of 2)

	1960	1970	1980	1990	1991
III. PERFORMANCE					
Revenue Vehicle-Miles (millions)					
Motor Bus	1,576 ^j	1,409 ^k	1,677 ^k	2,130 ^k	2,182 ^k
Heavy Rail	391	407	385	537	525
Light Rail	75	34	18	24	28
Trolley Bus	101	33	13	14	14
Demand Response	-	-	-	306	359
Ferryboat	-	-	2	2	2
Commuter Rail	-	-	179	213	217
Other**	-	-	13	16	21
Total	2,143	1,883	2,287	3,242	3,348
Unlinked Passenger Trips (millions)					
Motor Bus	-	5,034 ^l	5,837 ^l	5,677 ^l	5,686 ^l
Heavy Rail	-	1,881	2,108	2,346	2,167
Light Rail	-	124	133	175	186
Trolley Bus	-	182	142	126	125
Demand Response	-	-	-	68	72
Ferryboat	-	-	63	50	50
Commuter Rail	-	-	280	328	324
Other**	-	-	4	29	33
Total	-	7,332	8,567	8,799	8,643
Passenger-Miles (millions)					
Motor Bus	-	-	21,790 ^m	20,981 ^m	21,150 ^m
Heavy Rail	-	-	10,588	11,475	10,488
Light Rail	-	-	381	571	670
Trolley Bus	-	-	219	193	194
Demand Response	-	-	-	431	528
Ferryboat	-	-	335	286	274
Commuter Rail	-	-	6,516	7,082	7,384
Other**	-	-	50	124	172
Total	-	-	39,854	41,143	40,860

* 1980 figure included in General Administration.

** Figure obtained by addition/subtraction.

Total is not sum of all modes since many systems operate more than one mode.

~ Included in Heavy Rail figure.

+ Included in Motor Bus figure.

Source: The following data references are listed in Appendix A, p.A-9.

Source	Reference Number/Location	Source	Reference Number/Location
a	2) Table 5A	h	2) Table 13
b	2) Table 20	i	2) Table 53
c	2) Table 6A	j	2) Table 11
d	2) Table 16	k	2) Table 39
e	2) Table 1	l	2) Table 31
f	2) Table 18	m	2) Table 38
g	2) Table 41		

WATER TRANSPORT PROFILE (page 1 of 4)

	1960	1970	1980	1990	1991
I. FINANCIAL					
Operating Revenues (\$ millions)					
Domestic Freight*	1,722 ^a	1,822 ^a	7,219 ^a	7,749 ^a	7,962 ^a
Coastal Waterways	747	834	3,155	3,008	2,925
Inland Waterways	461	621	2,395	2,852	2,956
Great Lakes	227	239	513	586	541
Locks, Channels	287	376	1,156	1,303	1,540
International Freight	1,765	3,187	8,279	13,118	12,705
Total Passengers*	281	287	304	1,327	1,357
Domestic Passengers, Intercity	14	12	21	40	44
International Passengers ¹	267	275	283	1,287	1,313
Revenues of U.S. Commercial Fishing Fleet					
U.S. Commercial Landings (\$ millions)	354 ^b	613 ^b	2,237 ^b	3,522 ^b	3,308 ^b
II. INVENTORY					
Number of Companies, Class A & B Carriers Inland and Coastal Waterways	105 ^c	82 ^c	82 ^c	327 ^c	351 ^c
Number of Companies, Maritime Carriers	27 ^d	18 ^d	4 ^d	6 ^d	-
Number of Employees ²					
Ships, Boat Building, and Repairing	141,200 ^e	171,800 ^e	220,500 ^e	187,800 ^e	177,700 ^e
Water Transportation	232,000	213,400	212,700	177,700	187,700
Number of Employees					
Passenger/Combo	8,560 ^f	2,178 ^f	618 ^f	642 ^f	590 ^f
Cargo	28,668	22,257	9,878	7,019	6,006
Tankers	12,053	10,567	8,722	4,471	4,377
Total	49,281	35,000	19,218	12,132	10,973
Mileage of Commercially Navigable Waterways	25,253 ^a	25,543 ^a	25,543 ^a	25,777 ^a	25,777 ^a
Number of Vessels					
Total Non-Self-Propelled	16,777 ^g	19,377 ^g	31,662 ^g	31,017 ^g	**
Dry Cargo Barges and Scows	14,025	15,890	27,426	27,091	**
Tankers	2,429	3,281	4,166	3,913	**
Railroad Car Floats	323	206	70	13	**
Total Self-Propelled	6,543	6,455	7,130	8,216	**
Dry Cargo/Passenger	1,796	1,761	2,036	2,205	**
Ferries, Railroad Car	31	17	67	579	**
Tankers	489	421	330	214	**
Towboats/tugs	4,203	4,248	4,693	5,218	**
Sailing Vessels	24	8	4	-	**
U.S. Merchant Marine (over 1,000 gross tons)					
Total U.S. Flag	5,852 ^h	1,579 ^h	864 ^h	636 ^h	619 ^h
Passenger/Cargo	309	171	65	10	10
Freighters	2,138	977	310	199	191
Bulk Carriers	57	38	20	26	24
Tankers	422	294	308	233	226
Intermodal	-	99	161	168	168
Privately Owned	1,008	793	578	408	394
Government Owned	1,918	786	286	228	225
Number of Recreational Boats (thousands)	2,450 ⁱ	7,400 ⁱ	14,600 ⁱ	19,500 ⁱ	20,000 ⁱ

WATER TRANSPORT PROFILE (page 2 of 4)

	1960	1970	1980	1990	1991
III. PERFORMANCE					
Ton-Miles (thousands)					
Domestic Waterfreight					
Coastwise	256,000,000 ^a	359,748,000 ^a	631,149,247 ^a	470,000,000 ^a	450,000,000 ^a
Internal	896,140,000	155,816,000	227,342,991	283,000,000	286,000,000
Lakewise	65,990,000	79,416,000	61,747,114	56,000,000	53,000,000
Local	1,730,000	1,179,000	1,596,412	1,200,000	1,212,000
Total*	413,334,000	596,195,000	921,835,764	810,200,000	790,212,000
Tons of Freight Hauled (thousands)					
Domestic Waterfreight					
Coastwise	209,197 ^j	238,000 ^j	329,609 ^j	303,100 ^k	297,900 ^k
Internal	291,057	472,000	534,979	622,600	597,700
Lakewise	155,109	157,000	115,124	110,200	130,400
Local	104,193	81,000	94,184	86,400	78,200
Total*	759,566	948,000	1,073,896	1,122,300	1,077,200
Export					
Great Lakes Ports*	23,151	36,000	45,077	32,900	28,800
Coastal Ports	104,810	206,000	358,806	404,900	430,800
Total	127,960	242,000	403,883	437,800	459,600
Imports					
Great Lakes Ports*	12,851	26,000	15,515	17,500	14,300
Coastal Ports	198,466	313,000	502,006	559,300	541,100
Total	211,317	339,000	517,521	576,900	555,400
Tons of Freight, Intraterritorial (thousands)	1,000 ^l	1,500 ^l	3,588 ^l	4,500	4,600
Average Haul, Domestic System (miles-per-ton)					
Coastwise	1,496 ^a	1,509 ^a	1,915 ^a	1,604 ^a	1,585 ^a
Internal	282	330	405	449	449
Lakewise	522	506	536	546	540
Cargo Capacity (short tons)					
Total Non-Self-Propelled Vessels	16,355,657 ^b	24,026,024 ^b	44,875,116 ^b	48,603,351 ^b	**
Dry Cargo Barges and Scows	12,147,006	17,695,275	34,486,851	37,973,654	**
Tankers	4,208,651	6,330,749	10,388,265	10,629,697	**
Total Self-Propelled Vessels	15,905,881	19,284,050	23,906,346	19,723,788	**
Dry Cargo/Passenger	12,188,956	10,815,977	8,011,587	7,042,263	**
Tankers	3,716,925	8,468,073	15,894,753	12,681,525	**
Fuel Consumption (thousand barrels)					
Diesel Fuel and Distillate	18,730 ^a	19,503 ^a	35,201 ^a	52,310 ^a	51,610 ^a
Residual Fuel Oil	94,084	89,850	213,131	148,764	161,573
Gasoline	9,200	14,238	25,048	30,962	40,707
Total	122,014	123,591	273,380	232,036	253,890
Total Number of Vessels Involved in Marine Accidents³	2,904	2,582	5,738	5,494 ^l	3,514 ^l
Number of Fatalities in Waterborne Transport					
Freight	-	30 ^m	8 ^m	0 ^m	0 ^m
Tankship	-	4	4	5	0
Passenger Vessel	-	1	5	3	1

WATER TRANSPORT PROFILE (page 3 of 4)

	1960	1970	1980	1990	1991
Tug/Towboat	-	22 ^m	14 ^m	13 ^m	3 ^m
Offshore Supply	-	-	-	2	0
Fishing Vessel	-	77	60	47	14
State Numbered	-	-	-	3	6
MODU ⁴	-	-	-	0	0
Platform	-	-	-	1	3
Freight Barge	-	-	-	0	0
Tank Barge	-	+	-	0	0
Miscellaneous	-	44	56	11	3
Total	382	178	206	85	30
Number of Injuries in Waterborne Transport					
Freight	-	14	8	10	1
Tankship	-	19	9	13	5
Passenger Vessel	-	10	10	51	25
Tug/Towboat	-	10	27	19	16
Offshore Supply	-	-	-	9	3
Fishing Vessel	-	13	28	31	38
State Numbered	-	-	-	2	3
MODU	-	-	-	13	2
Platform	-	-	-	9	9
Freight Barge	-	-	-	3	2
Tank Barge	-	+	-	3	0
Miscellaneous	-	39	98	12	6
Total	1,398	105	180	175	110
Number of Fatalities in Recreational Boating					
Inboard	-	119 ⁱ	100 ⁱ	50 ⁱ	53 ⁱ
Outboard	-	774	609	454	457
Inboard/Outboard	-	28	47	53	61
Jet	-	-	10	25	20
Sail	-	44	43	20	21
Manual (oars, paddle)	-	205	272	182	209
Other	-	29	14	5	9
Propulsion Unknown	-	219	265	76	94
Total	819 ⁱ	1,418	1,360	865	924

WATER TRANSPORT PROFILE (page 4 of 4)

- ⁺ Included in Tankship figure.
- ^{*} Figures obtained by addition/subtraction and may not appear directly in data source.
- [~] Data for January 1, 1990 through June 30, 1991 included in 1990 figure.
- ¹ Revenues paid by American travelers to U.S. and foreign flag carriers.
- ² Number of shipboard jobs on oceangoing commercial ships, 1,000 gross tons and over.
- ³ Casualties to commercial vessels under USCG jurisdiction.
- ⁴ Mobile Offshore Drilling Units.

Source: The following data references are listed in Appendix A, pp. A-9, A-10.

<u>Source</u>	<u>Reference</u> <u>Number/Location</u>
a	9) pp. 41, 42, 44, 57, 64, 71
b	39) personal communication
c	11) Appendix E, Table 1
d	31) personal communication
e	26) SIC 373 and SIC 44
f	31) personal communication
g	17) annual issues, Table 1
h	30) Table 6
i	19) pp. 6, 7, 20
j	18) Part 5, Section 1, Table 1A/B
k	17) personal communication
l	18) Part 5, Section 3, Table 18
m	20) personal communication

RAIL PROFILE
A. CLASS I RAILROADS (page 1 of 2)

	1960	1970	1980	1990	1991
I. FINANCIAL¹					
Operating Revenues, Class I Line-Haul Railroads (\$ millions)					
Passenger	640 ^a	421 ^a	446 ^a	94 ^a	94 ^a
Freight	8,025	10,922	26,350	27,471	26,949
Other	849	649	1,462	805	802
Total	9,514	11,992	28,258	28,370	27,845
Operating Expenses, Class I Line-Haul Railroads ² (\$ millions)	7,565	9,660	26,355	24,652	28,061
II. INVENTORY					
Number of Vehicles, Class I Railroads					
Freight Cars	1,658,292	1,423,921	1,168,114	658,902	633,489
Locomotives	29,031	27,077	28,094	18,835	18,344
Number of Companies, Class I Railroads	106	71	38	14	13
Number of Employees, Class I Railroads	780,494	566,282	458,994	216,424	206,386
Line Mileage, Class I Line-Haul Railroads	217,552	206,265	164,822	119,758	116,626
III. PERFORMANCE					
Car Mileage, Class I Railroads (thousands)					
Freight	28,170,000	29,890,000	29,277,000	26,159,000	25,628,000
Train Mileage, Class I Railroads (thousands)					
Freight	404,464	427,065	428,498	379,582	374,974
Locomotive Mileage, Class I Railroads (thousands)					
Freight	421,900 ^b	1,278,200 ^b	1,319,010 ^b	1,144,559 ^b	1,109,890 ^b
Train and Yard Switching	-	-	212,040	135,806	128,452
Total	-	-	1,531,050	1,280,365	1,238,343
Revenue Passengers Carried, Class I Railroads (thousands) (Commuter Rail)	203,000 ^c	206,100 ^c	279,400 ^c	328,000 ^c	325,200 ^c
Revenue Passenger-Miles Class I Railroads (thousands) (Commuter Rail)	4,197,100 ^d	4,591,700 ^d	6,516,000 ^e	7,082,000 ^e	7,384,000 ^e
Average Passenger Trip Length, Class I Railroads (miles)* (Commuter Rail)	20.7 ^c	22.3 ^c	23.3 ^c	21.4 ^c	22.7 ^c
Revenue Ton-Miles Class I Railroads (millions)					
Freight	572,309 ^a	764,809 ^a	918,958 ^a	1,033,969 ^a	1,038,875 ^a
Average Haul per Ton, Class I Railroads (miles)					
Freight	461	515	616	726	751
Average Revenue per Passenger-Mile (cents) (Commuter Rail)	2.9 ^c	3.8 ^c	6.7 ^c	13.4 ^c	12.5 ^c

RAIL PROFILE

A. CLASS I RAILROADS (page 2 of 2)

	1960	1970	1980	1990	1991
Number of Fatalities, Railroads and Grade Crossings					
Passengers on Trains	34 ^f	10 ^f	4 ^f	3 ^f	8 ^f
Employees on Duty	215	179	97	40	35
Employees Not on Duty	-	-	4	0	1
Trespassers	637	607	566	700	769
Non-Trespassers	1,459	1,535	739	551	484
Contractor Employees	-	-	7	3	3
Total Railroad and Grade Crossing	2,345	2,225	1,417	1,297	1,194
Grade Crossing only	1,421	1,440	833	698	608
Railroad only	924	785	584	599	586

* Figures may not appear directly in data source.

¹ Operating expenses include equipment, joint facility rents, leased roads and equipment, and all taxes except Federal income.

² Excludes Amtrak.

Source: The following data references are listed in Appendix A, pp. A-9, A-10.

<u>Source</u>	<u>Reference Number/Location</u>
a	4) pp. 10, 12, 13, 14, 33, 34, 36, 40, 44, 48, 50, 55
b	5) Series 3, Series 14
c	9) pp. 48, 50
d	4) p. 32
e	2) Table 38
f	33) personal communication

RAIL PROFILE

B. AMTRAK

	1972	1980	1990	1991
I. FINANCIAL				
Operating Revenues (\$ thousands)				
Passenger	138,176 ^a	368,240 ^a	978,213 ^a	1,208,682 ^a
Other	162,580	85,273	330,187	150,268
Total	300,756	453,513	1,308,400	1,358,950
Operating Expenses (\$ thousands)	286,339	1,081,239	2,011,800 ^b	2,080,538
II. INVENTORY				
Number of Vehicles				
Passenger Train-Cars	1,569	2,128	1,983	1,967
Locomotives	185	419	318	316
Number of Employees	1,500 ^b	21,416 ^b	24,000 ^b	24,090 ^b
Average Line Mileage	-	23,940 ^c	24,000 ^c	24,596 ^c
III. PERFORMANCE				
Passenger Train-Car Miles (thousands)	213,261 ^d	235,200 ^d	300,855 ^d	312,467 ^d
Passenger Train Miles (thousands)	26,302	29,500	32,892	33,883
Passenger Locomotive Miles (thousands)	-	40,600	49,403	50,615
Revenue Passengers Carried (thousands)	16,644	20,800	22,126	22,032
Revenue Passenger-Miles (thousands)	3,038,603	4,503,200	6,040,768	6,273,638
Average Revenue per Passenger (dollars)	8.3 ^e	17.7 ^e	39.6 ^e	41.2 ^e
Average Revenue Passenger-Mile (cents)	4.5	8.2	14.5	14.5
Average Trip per Passenger (miles)	182.6	217.0	272.5	284.7

Source: The following data references are listed in Appendix A, p. A-9.

<u>Source</u>	<u>Reference Number/Location</u>
a	3) Annual Reports
b	3) Human Resources Information Center
c	3) Route Miles by Railroad, Corp. Planning & Development
d	3) Train Information System Reports
e	3) Train Earnings Reports

OIL PIPELINE PROFILE

	1960	1970	1980	1990	1991
I. FINANCIAL					
Operating Revenues (\$ millions)					
FERC-regulated	770 ^a	1,188 ^a	6,340 ^a	7,045 ^a	6,802 ^a
Non-Regulated	128	208	1,208	1,342	1,296
Total	895	1,396	7,548	8,387	8,098
Operating Expenses (\$ millions)					
FERC-regulated [#]	418 ^b	672 ^b	-	4,809 ^b	5,009 ^b
II. INVENTORY					
Number of FERC-regulated Companies	87 ^c	101 ^c	130 ^c	150 ^c	145 ^c
Number of Employees, FERC-regulated Companies	23,100 ^d	15,017 ^d	21,300 ^d	18,500 ^d	19,000 ^d
Miles of Pipeline (statute miles) ¹					
Crude lines					
Trunk	67,200 ^b	75,143 ^b	71,568 ^b	65,507 ^b	65,920 ^b
Gathering	72,800	71,132	58,263	53,292	49,940
Product Lines	49,859	72,396	88,562	89,947	87,968
All Lines	190,944	218,671	218,393	208,752	203,828
III. PERFORMANCE					
Intercity Ton-Miles (millions)					
Crude Petroleum	189,500 ^e	366,800 ^e	362,600 ^e	334,500 ^e	335,500 ^e
Petroleum Products	43,500	64,200	225,600	249,300	242,300
Total	233,000	431,000	588,200	583,800	577,800
Tons Transported (millions)					
Crude Petroleum	328.4	457.2	416.1	415.8	407.2
Petroleum Products					
(delivered from lines)	140.0	333.1	544.7	641.6	640.9
Total	468.4	790.3	960.8	1,057.4	1,048.2
Average Length of Haul (statute miles)					
Crude Petroleum	325 ^f	300 ^f	871 ^f	804 ^f	824 ^f
Petroleum Products	269	357	414	389	378
Total Liquid Pipeline Fatalities	-	4 ^g	3 ^g	3 ^g	0 ^g

FERC Federal Energy Regulatory Commission. In 1960 and 1970, these were ICC-regulated companies.

[#] Figures represent balance after deducting net income from Operating Revenues, as reported by *Oil and Gas Journal*, November 1992.

¹ Regulated plus unregulated mileage of crude oil trunk and gathering lines, plus refined oil trunk lines.

Source: The following data references are listed in Appendix A, pp. A-9, A-10.

Source	Reference Number/Location
a	9) p. 40
b	16) personal communication
c	10) personal communication
d	26) SIC 46
e	9) p. 59
f	9) p. 71
g	37) personal communication

NATURAL GAS PIPELINE PROFILE (page 1 of 2)

	1960	1970	1980	1990	1991
I. FINANCIAL					
Transmission Pipeline Companies					
Total Operating Revenues (\$ millions)	3,190 ^a	5,928 ^a	41,604 ^b	21,756 ^b	19,818 ^b
Operating Expenses (\$ millions)					
Operating Expenses	2,031	4,094	36,075	16,429	14,789
Maintenance Expenses	64	109	405	629	625
Total Operating and Maintenance Expenses	2,095	4,203	36,480	17,058	15,414
Taxes					
Federal Taxes*	167	202	1,327	768	661
State and Local Taxes*	96	174	664	477	481
Total Taxes	263	376	1,991	1,245	1,143
Total Operating Expenses	2,698	5,088	39,709	19,484	17,856
Distribution Pipeline Companies					
Total Operating Revenues (\$ millions)	-	-	14,013 ^a	18,750 ^c	17,812 ^c
Operating Expenses (\$ millions)					
Operating Expenses	-	-	11,539	14,020	13,005
Maintenance Expenses	-	-	252	524	535
Total Operating and Maintenance Expenses	-	-	11,791	14,544	13,541
Taxes					
Federal Taxes*	-	-	351	581	594
State and Local Taxes*	-	-	785	1,045	1,045
Total Taxes	-	-	1,136	1,625	1,639
Total Operating Expenses	-	-	13,263	17,125	16,162
II. INVENTORY					
Transmission Pipeline Companies					
Number of Employees	31,400 ^d	32,400 ^d	45,200 ^d	37,400 ^e	37,900 ^e
Miles of Transmission Pipeline					
Steel Pipe	-	-	262,200 ^g	276,900 ^g	278,300 ^g
Plastic Pipe**	-	-	4,400	3,100	3,200
Other	-	-	300	100	100
Total	183,700 ^f	252,200 ^f	266,900	280,100	281,600
Distribution Pipeline Companies					
Number of Employees	-	-	52,100 ^d	64,700 ^e	62,700 ^e
Miles of Distribution Pipeline					
Steel Pipe	-	-	560,100 ^g	581,900 ^g	583,700 ^g
Plastic Pipe**	-	-	78,100	202,100	221,600
Other	-	-	61,900	52,600	52,100
Total	391,400 ^f	594,800 ^f	700,100	836,700	857,400
Number of Interstate Natural Gas Pipeline Companies	87 ^h	89 ^h	91 ^h	132 ^h	125 ^h
III. PERFORMANCE					
Total Marketed Production (million cubic feet)	12,771,038 ⁱ	21,920,642 ⁱ	20,179,724 ⁱ	18,561,596 ⁱ	18,522,754 ⁱ
Total Delivered to Consumers (million cubic feet)	10,382,681 ^j	19,018,462 ^j	18,216,233 ^j	16,818,882 ^j	17,304,704 ^j
Total Consumed (million cubic feet)	11,966,537	21,139,386	19,877,293	18,715,090	19,054,014
Total Gas Used as a Pipeline Fuel (million cubic feet)	347,075	722,166	634,622	659,816	600,891
Total Gas Pipeline Fatalities	-	22 ^k	11 ^k	5 ^k	14 ^k

NATURAL GAS PIPELINE PROFILE (page 2 of 2)

- * Figures obtained by addition/subtraction and may not appear directly in data source.
- ** Includes fiberglass.

Source: The following data references are listed in Appendix A, pp. A-9, A-10.

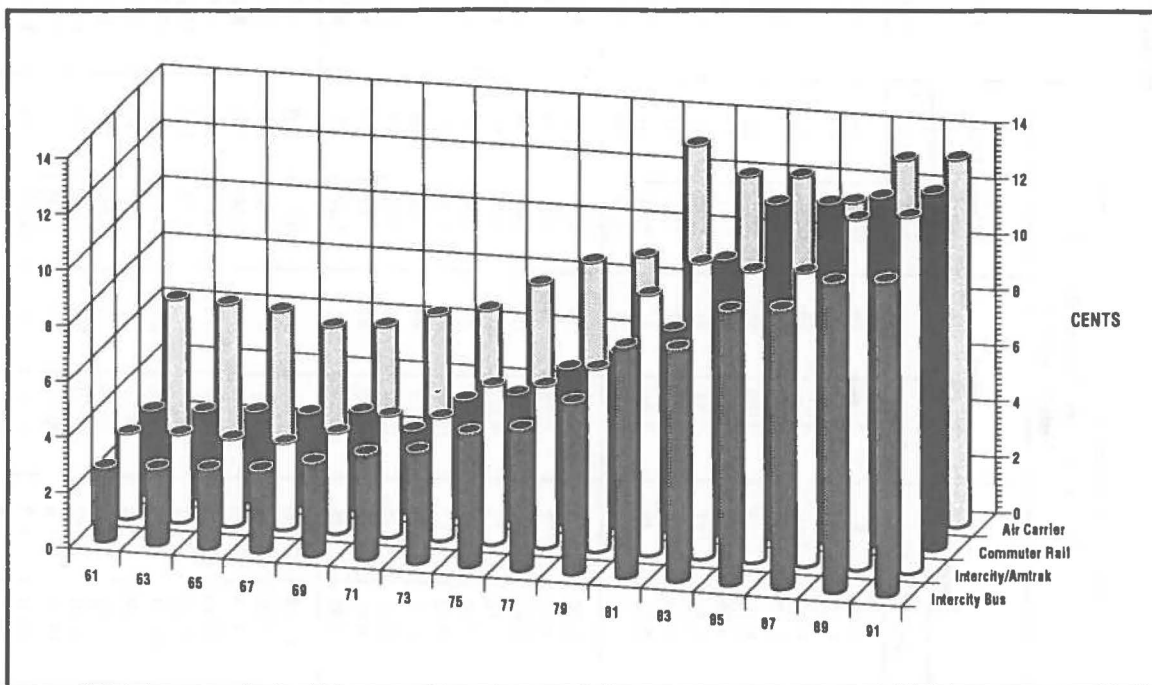
<u>Source</u>	<u>Reference</u>
	<u>Number/Location</u>
a	1) Table 134
b	1) Table 12-3
c	1) Table 12-2
d	1) Table 153
e	1) Table 17-2
f	1) Table 44
g	1) Table 5-1
h	24) preface
i	23) Tables 2, 13
j	23) Tables 14, 16
k	37) personal communication

TRANSPORTATION TRENDS

Transportation Trends includes transportation statistics from 1960 through 1991/1992, using tables and graphs to indicate shifts in performance, inventory, safety, production and cost data.

Section I: Performance

This section includes basic transportation descriptors such as operating revenues and expenses, vehicle statistics, and passenger and freight data.



**Table 1. Average Passenger Revenue per Passenger-Mile, 1960-1991
(cents)**

Year	Air Carrier, certificated, domestic, scheduled service						Commuter Rail		Intercity/ Amtrak ^a		Class I Bus, ^b Intercity		Consumer Price Index*	
	Total		First Class		Coach Plus Economy									
	Avg.	Index	Avg.	Index	Avg.	Index	Avg.	Index	Avg.	Index	Avg.	Index	Avg.	Index
1960	6.09	53	7.06	49	5.01	44	2.92	44	3.03	37	2.71	37	29.6	36
1961	6.22	55	7.34	50	5.42	50	3.07	46	3.08	38	2.69	37	29.9	36
1962	6.45	56	7.57	53	5.76	53	3.13	47	3.10	38	2.72	37	30.2	37
1963	6.17	54	7.17	50	5.62	52	3.17	47	3.18	39	2.78	38	30.6	37
1964	6.12	53	7.26	51	5.58	52	3.20	48	3.16	39	2.80	39	31.0	38
1965	6.06	53	7.33	51	5.52	51	3.30	49	3.14	38	2.88	40	31.5	38
1966	5.83	51	7.24	51	5.28	49	3.33	50	3.13	38	2.89	40	32.4	39
1967	5.64	49	7.24	51	5.13	47	3.36	50	3.13	38	2.98	41	33.4	41
1968	5.61	49	7.33	51	5.11	47	3.49	52	3.33	41	3.18	44	34.8	42
1969	5.79	50	7.78	54	5.27	49	3.55	53	3.63	44	3.39	47	36.7	45
1970	6.00	52	8.31	58	5.46	50	3.75	56	4.02	49	3.60	50	38.8	47
1971	6.32	55	8.58	60	5.81	54	3.92	45	4.38	54	3.83	53	40.5	49
1972	6.40	56	8.70	61	5.88	54	4.19	63	4.42	54	3.98	55	41.8	51
1973	6.63	58	8.93	62	6.11	56	4.25	63	4.44	54	4.05	56	44.4	54
1974	7.52	65	8.94	63	6.94	64	4.41	66	5.29	65	4.41	61	49.3	60
1975	7.68	67	10.56	74	7.05	65	4.57	68	5.71	70	4.85	67	53.8	65
1976	8.16	71	11.50	80	7.49	69	5.00	75	5.62	69	5.14	71	56.9	69
1977	8.61	75	12.20	85	7.92	73	5.63	84	5.83	71	5.12	71	60.6	74
1978	8.49	74	11.98	84	7.81	72	5.96	89	6.08	74	5.61	77	65.2	79
1979	8.95	78	11.39	80	8.34	77	6.32	94	6.59	81	6.21	86	72.6	88
1980	11.49	100	14.29	100	10.82	100	6.70	100	8.18	100	7.26	100	82.4	100
1981	13.08	114	15.01	105	12.51	116	7.28	109	9.38	115	8.35	115	90.9	110
1982	12.18	106	14.06	98	11.66	108	8.13	121	10.19	125	8.18	113	96.5	117
1983	12.10	105	16.10	113	11.50	106	9.94	148	10.65	130	8.40	116	99.6	121
1984	12.70	111	17.70	124	12.20	113	11.01	164	10.91	133	9.05	125	103.9	126
1985	12.21	106	17.58	123	10.71	99	12.08	180	10.48	128	9.91	137	107.6	131
1986	11.08	96	14.51	102	10.39	96	12.14	181	10.60	130	10.45	144	109.6	133
1987	11.42	99	18.28	128	10.61	98	12.20	182	10.58	129	10.07	139	113.6	138
1988	12.31	107	19.90	139	11.51	106	12.39	185	11.46	140	10.73	148	118.3	144
1989	13.08	114	20.97	147	12.20	113	12.56	187	12.62	154	11.18	154	124.0	151
1990	13.21	115	21.79	152	12.25	113	13.44	201	12.85	157	11.55	159	130.7	159
1991	13.22	115	21.51	151	12.09	112	12.46	186	12.83	157	12.03	166	136.2	165

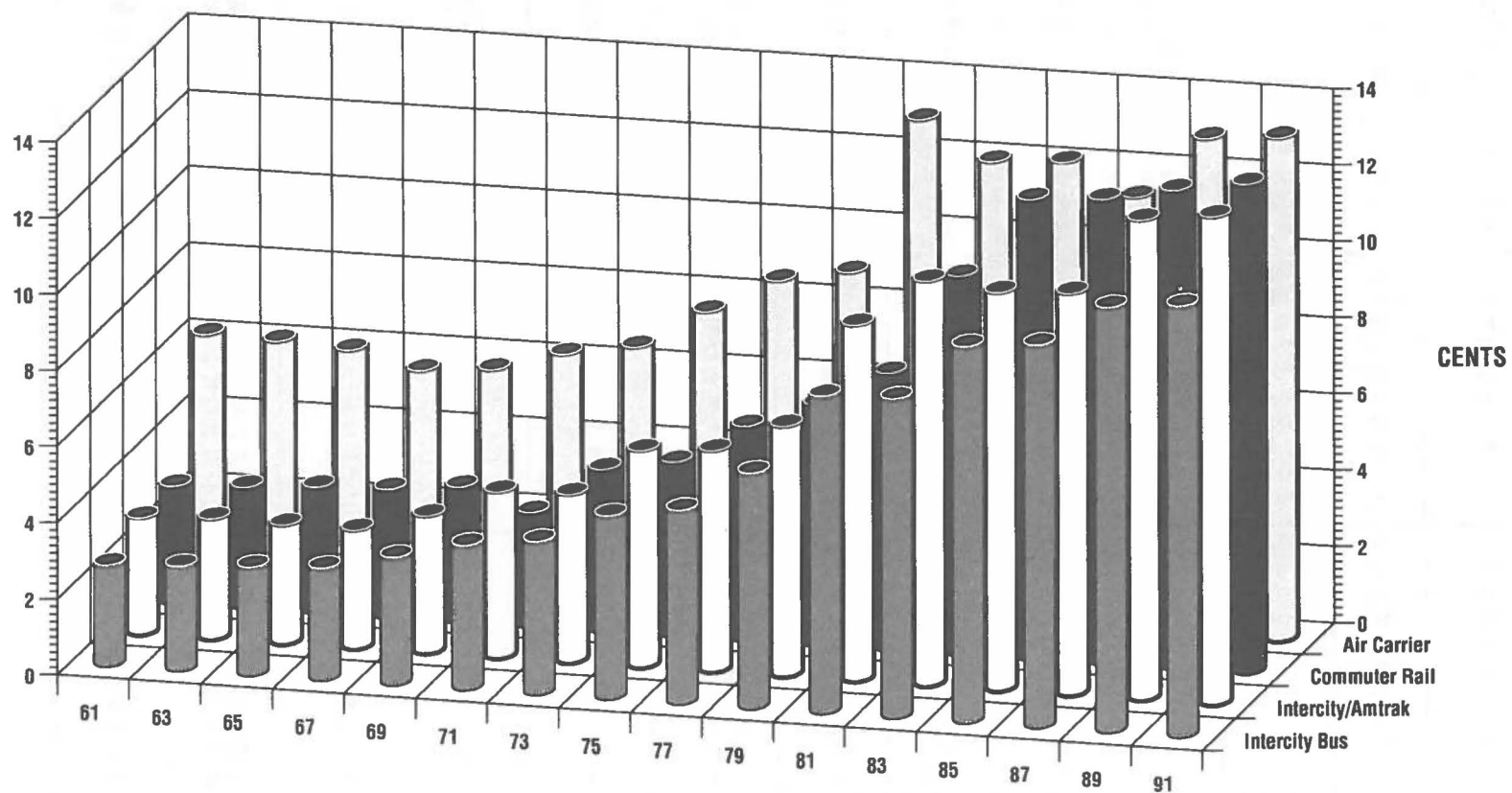
^aAmtrak, 1971-1991.

^bRegular route intercity service.

Index (1980 = 100)

*Index (1982-1984 = 100)

Source: See Appendix A, p. A-11.



Source: See Table 1.

Figure 8. Average Passenger Revenue per Passenger-Mile, 1961-1991

**Table 2. Average Freight Revenue per Ton-Mile, 1960-1991
(cents)**

Year	Air Carrier, certificated, domestic, scheduled service		Class I Rail		Class I Intercity Motor Carriers of Property ^a		Oil Pipeline		Inland Waterway Carrier ^b		Producer Price Index ^c	
	Avg.	Index	Avg.	Index	Avg.	Index	Avg.	Index	Avg.	Index	Avg.	Index
1960	22.80	49	1.40	49	6.31	35	0.32	24	-	-	33	38
1961	22.08	48	1.37	48	6.30	35	0.32	24	-	-	33	38
1962	21.31	47	1.35	47	6.41	36	0.32	24	-	-	33	38
1963	21.72	46	1.31	46	6.38	35	0.32	24	-	-	33	38
1964	20.97	45	1.28	45	6.66	37	0.30	22	0.36	47	33	38
1965	20.46	44	1.27	44	6.46	36	0.28	21	0.35	45	34	39
1966	20.21	44	1.26	44	6.34	35	0.27	20	0.33	43	35	40
1967	19.90	43	1.27	44	6.65	37	0.26	20	0.29	38	36	41
1968	19.97	43	1.31	46	6.93	39	0.26	20	0.31	40	37	42
1969	21.03	45	1.35	47	7.08	39	0.27	20	0.29	37	38	43
1970	21.91	47	1.43	50	8.50	47	0.27	22	0.30	39	39	45
1971	22.58	49	1.59	55	9.30	52	0.29	22	0.34	44	41	46
1972	22.75	49	1.62	56	9.50	53	0.29	22	0.33	43	42	48
1973	23.31	50	1.62	56	9.80	54	0.29	22	0.38	49	46	52
1974	25.92	56	1.85	64	10.40	58	0.32	24	0.49	64	53	60
1975	28.22	61	2.04	71	11.60	64	0.37	28	0.52	67	58	66
1976	31.81	69	2.19	76	12.00	67	0.41	31	0.51	66	61	69
1977	34.22	74	2.29	80	12.70	71	0.62	47	0.56	72	65	74
1978	37.10	80	2.36	82	13.40	74	1.01	76	0.62	81	70	79
1979	41.02	89	2.61	91	15.20	84	1.12	84	0.67	86	78	88
1980	46.31	100	2.87	100	18.00	100	1.33	100	0.77	100	88	100
1981	50.15	108	3.18	111	20.00	111	1.45	110	0.85	110	96	109
1982	49.69	107	3.21	112	20.77	115	1.45	109	0.84	109	100	114
1983	49.30	106	3.12	109	21.23	118	1.62	122	0.82	106	102	115
1984	50.20	108	3.09	108	21.54	120	1.62	122	0.82	106	104	118
1985	48.77	105	3.04	106	22.90	127	1.57	118	0.80	104	105	119
1986	105.43 ^c	228	2.92	102	21.63	120	1.50	113	0.76	99	103	117
1987	109.79	237	2.73	95	22.48	125	1.45	110	0.73	95	105	120
1988	113.66	245	2.72	95	23.17	129	1.36	103	0.75	97	108	123
1989	96.84	209	2.67	93	23.91	133	1.33	100	0.77	100	114	129
1990	59.96	129	2.66	93	24.38	135	1.47	108	0.76	98	119	136
1991	64.81	139	2.59	93	24.86	138	1.40	106	0.78	101	122	138

^aIntercity service excluding carriers of household goods.

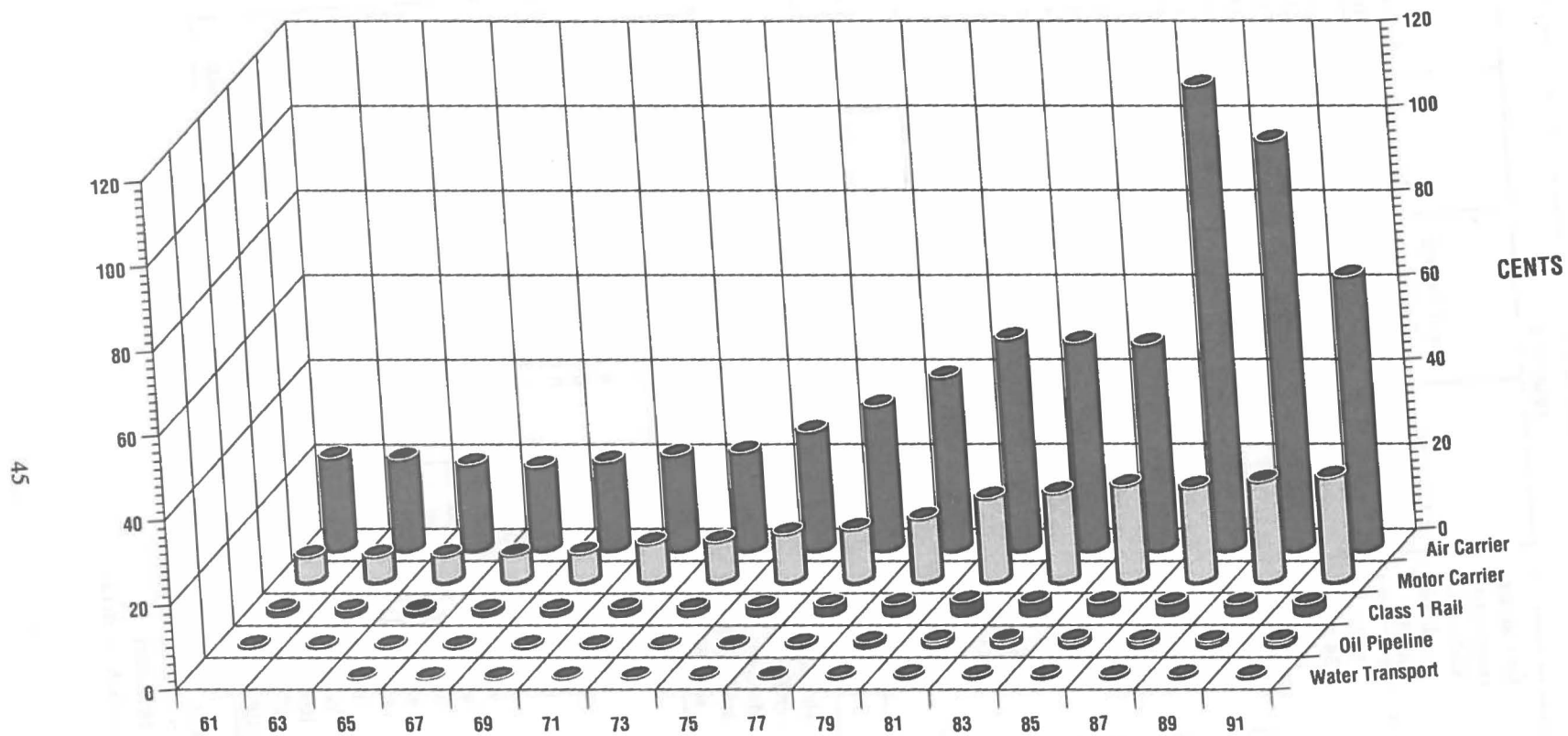
^bBarge lines operating on Mississippi River and Tributaries.

^cIncrease due to inclusion of Federal Express and other freight carriers.

Index (1980 = 100)

Index (1982-1984 = 100)

Source: See Appendix A, p. A-11.



Source: See Table 2.

Figure 9. Average Freight Revenue per Ton-Mile, 1961-1991

**Table 3. Average Passenger Fare, 1960-1991
(dollars)**

1960-1975					
Year	Air Carrier, certificated, domestic, scheduled service	Class 1 Bus, Intercity ^a	Local Transit, all modes (unlinked)	Commuter Rail	Intercity/ Amtrak ^b
1960	34.12	2.46	0.14	0.64	4.22
1961	34.15	2.48	0.14	0.65	4.21
1962	34.18	2.50	0.15	0.66	4.20
1963	34.22	2.52	0.15	0.67	4.00
1964	34.13	2.55	0.15	0.68	3.86
1965	34.12	2.73	0.16	0.71	3.92
1966	33.41	2.71	0.16	0.72	3.83
1967	33.16	2.79	0.17	0.72	3.48
1968	33.70	2.91	0.19	0.75	3.16
1969	37.52	3.55	0.21	0.78	3.15
1970	40.65	3.81	0.22	0.84	3.19
1971	43.13	4.19	0.23	0.87	9.58
1972	43.87	4.25	0.24	0.93	9.31
1973	45.72	4.73	0.25	0.95	9.85
1974	51.43	5.13	0.27	1.00	12.20
1975	53.64	5.46	0.27	1.04	12.96

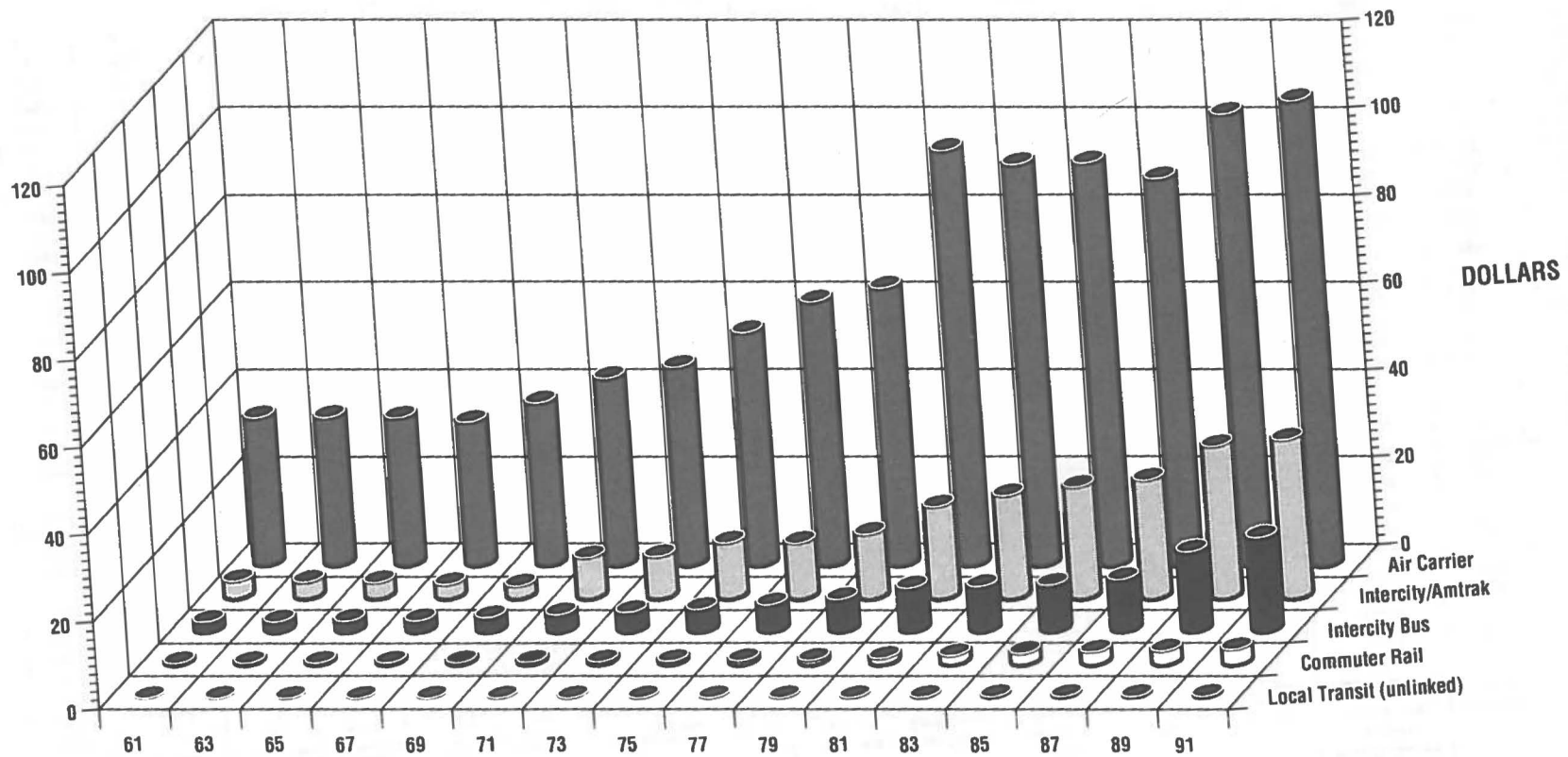
1976-1991					
Year	Air Carrier, certificated, domestic, scheduled service	Class 1 Bus, Intercity ^a	Local Transit, all modes (unlinked)	Commuter Rail	Intercity/ Amtrak ^b
1976	57.47	5.76	0.27	1.15	12.88
1977	60.67	6.48	0.28	1.16	12.90
1978	61.07	6.89	0.29	1.20	13.16
1979	63.81	7.71	0.29	1.25	14.93
1980	84.55	10.57	0.30	1.41	17.72
1981	95.42	10.30	0.33	1.70	21.25
1982	92.08	10.90	0.38	1.89	22.38
1983	92.17	10.66	0.39	2.31	23.78
1984	97.10	11.09	0.50	2.92	24.80
1985	92.53	11.02	0.53	2.85	25.78
1986	84.99	12.35	0.58	3.07	26.35
1987	88.95	12.28	0.59	3.18	27.39
1988	96.67	17.15	0.60	3.35	30.31
1989	103.65	18.62	0.61	3.41	35.17
1990	107.86	20.18	0.67	3.70	36.96
1991 ^P	106.69	21.86	0.70	3.76	36.68

^P preliminary.

^a Regular route intercity service.

^b Amtrak, 1971-1991.

Source: See Appendix A, p. A-12.



Source: See Table 3.

Figure 10. Average Passenger Fare, 1961-1991

Table 4. Total Operating Revenues, 1960-1991
(million dollars)

Year	Air Carrier, certificated, domestic, all services	Class 1 Bus, Intercity	Local Transit	Oil Pipeline ^a			Gas Pipeline ^b			Class 1 Intercity Motor Carriers of Property	Class 1 Rail	Intercity/ Amtrak ^c	Water Transport		
				Total	Regulated	Non- Regulated	Total	Transmission Companies	Distribution Companies				ICC-Regulated Carriers, Inland and Coastal	Maritime Carriers ^d	Class A Freight Forwarders
1960	2,129	463	1,407	895	770	125	-	-	-	2,218	9,514	637	1,010	524	438
1961	3,064	485	1,390	914	787	127	-	-	-	4,908	9,189	498	1,031	505	444
1962	3,439	589	1,404	939	811	128	-	-	-	5,428	9,440	492	1,049	629	466
1963	3,759	610	1,391	980	840	140	-	-	-	5,756	9,560	458	1,049	653	471
1964	4,251	655	1,408	1,013	865	148	-	-	-	6,200	9,857	443	1,064	705	488
1965	4,958	607	1,444	1,051	904	147	-	4,088	-	7,131	10,208	416	1,073	679	461
1966	5,745	644	1,479	1,096	941	155	-	4,289	-	7,897	10,655	404	1,088	655	528
1967	6,865	670	1,556	1,157	995	162	-	4,490	-	8,091	10,366	341	1,063	674	519
1968	7,753	695	1,563	1,205	1,023	182	-	4,863	-	9,593	10,855	291	1,098	802	561
1969	8,791	677	1,626	1,287	1,103	184	-	5,290	-	10,770	11,450	277	1,164	739	596
1970	9,290	722	1,707	1,396	1,188	208	-	5,928	-	11,137	11,992	248	502	833	600
1971	10,046	758	1,741	1,492	1,249	243	10,755	6,955	3,800	13,011	12,689	100	525	749	589
1972	11,163	775	1,729	1,583	1,338	245	11,551	7,390	4,161	14,994	13,410	163	545	885	728
1973	12,419	815	1,798	1,711	1,446	265	11,415	7,172	4,243	16,600	14,770	202	618	1,087	982
1974	14,703	933	1,940	1,878	1,587	291	13,959	9,085	4,874	16,704	16,923	257	879	1,478	1,171
1975	15,356	955	3,451	2,220	1,874	346	17,836	11,898	5,938	16,164	16,402	253	887	1,342	1,141
1976	17,503	993	3,883	2,532	2,137	395	22,791	15,416	7,375	18,360	18,537	287	1,035	1,583	1,384
1977	19,926	983	4,258	3,209	2,792	417	28,541	19,836	8,705	22,520	20,091	310	924	1,643	1,911
1978	22,892	1,037	4,681	5,452	4,907	545	32,925	22,989	9,936	26,855	21,721	321	867	1,889	1,864
1979	27,227	1,205	5,558	6,206	5,585	621	34,686	22,919	11,767	29,858	25,219	398	854	2,235	2,142
1980	33,728	1,397	6,510	7,548	6,340	1,208	55,617	41,604	14,013	30,338	28,258	454	991	2,340	1,056
1981	28,788	1,466	7,366	7,950	6,678	1,272	62,914	50,188	12,726	32,523	30,899	512	1,029	3,133	1,985
1982	28,728	1,439	8,044	8,489	7,131	1,358	70,500	55,847	14,653	32,246	27,504	514	1,031	2,817	1,654
1983	31,014	1,276	8,526	8,895	7,472	1,423	70,320	53,577	16,743	33,899	26,729	605	1,125	2,653	1,499
1984	35,373	1,255	11,623	9,343	7,848	1,495	70,685	53,319	17,366	35,820	29,453	659	1,070	2,706	1,458
1985	37,629	1,233	12,195	8,910	7,484	1,426	67,248	45,738	21,510	34,902	27,586	725	1,069	2,844	1,675
1986	41,043	1,394	13,342	8,698	7,306	1,392	52,562	33,887	18,352	35,559	26,204	755	1,049	2,045	1,728
1987	46,658	1,079	14,091	8,463	7,109	1,354	43,788	27,275	16,513	37,183	26,622	883	1,076	1,868	1,854
1988	50,155	1,122	14,536	8,224	6,908	1,316	43,148	26,482	16,666	39,824	27,934	982	1,107	2,093	1,912
1989	54,134	1,213	14,985	7,832	6,579	1,253	42,644	23,883	18,761	43,454	27,956	1,078	1,062	2,241	2,137
1990	57,994	943	16,053	8,387	7,045	1,342	40,288	21,756	18,532	46,710	28,370	1,134	1,071	2,324	3,970
1991	56,165	981	16,810	8,098	6,802	1,296	37,630	19,818	17,812	47,797	27,845	1,162	1,072	2,640	4,166

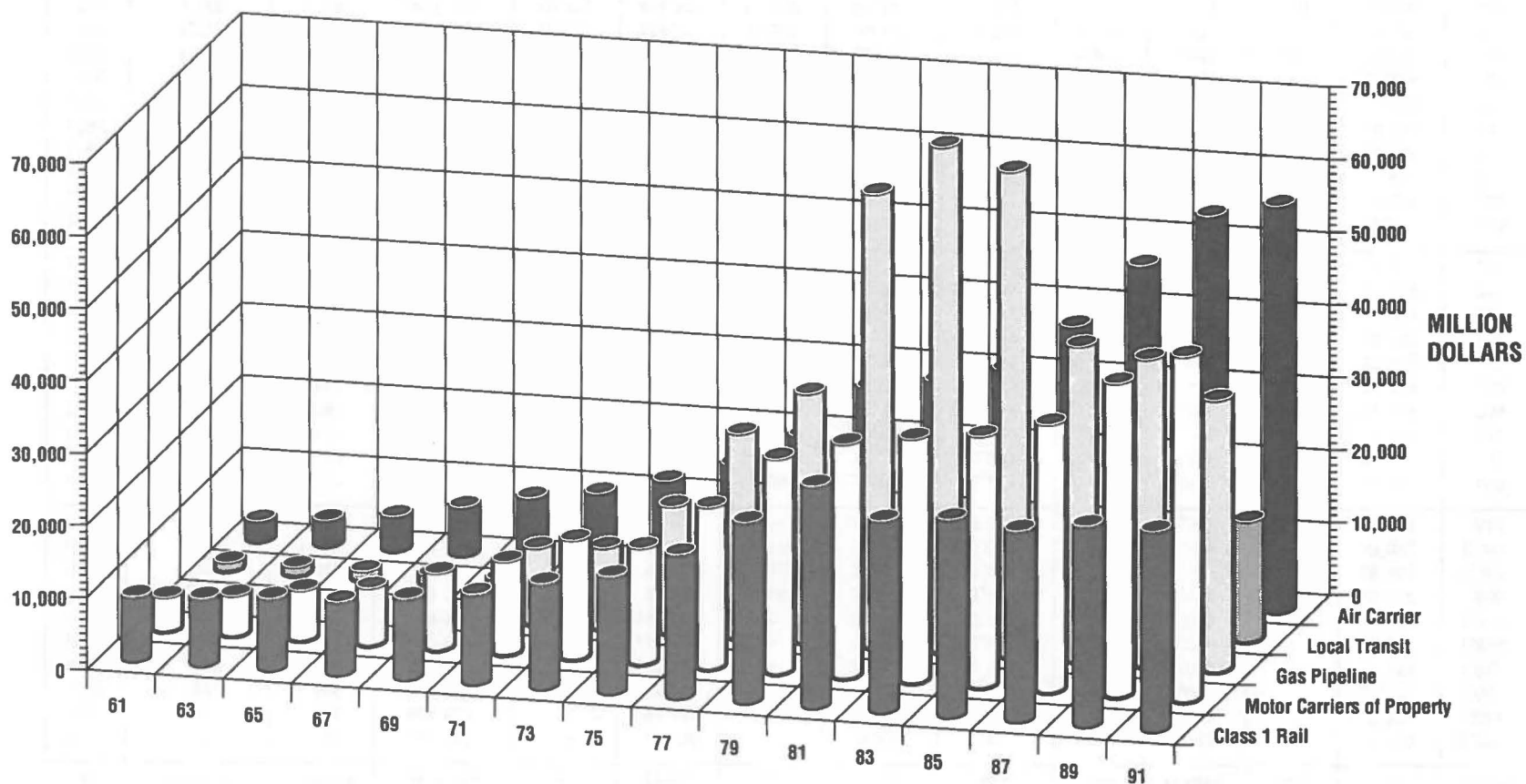
^a Oil pipeline revenues are much smaller than those of gas pipeline because oil pipeline companies are common carriers and include transport costs only.

^b Data not directly comparable from year to year due to acquisition and mergers.

Source: See Appendix A, pp. A-12, A-13.

^c Amtrak, 1971-1991.

^d Figures include only those American flag carriers being subsidized by MARAD.



Source: See Table 4.

Figure 11. Total Operating Revenues, 1961-1991

Table 5. Vehicle Miles 1960-1991
(millions)

Year	Air Carrier, certificated, domestic, all services ^a	General Aviation	Highway							Local Transit ^b	Com- muter Rail	Class 1 Rail Freight Car	Intercity/ Amtrak ^c
			Passenger Car & Taxi	Motor- cycle	Single- Unit Truck	Other Single- Unit Truck	Combi- nation Truck	Commer- cial Bus	School Bus				
1960	793	1,769	588,083	*	97,930	*	28,479	2,872	1,481	2,143	-	28,170	2,208
1961	833	1,858	604,557	*	99,588	*	28,994	2,846	1,550	2,077	-	27,226	2,084
1962	877	1,965	629,097	*	104,104	*	29,185	2,856	1,610	2,047	-	27,772	2,042
1963	926	2,049	645,371	*	125,753	*	29,816	2,841	1,642	2,022	-	28,153	1,962
1964	998	2,181	677,613	*	133,711	*	30,560	2,892	1,724	2,016	-	28,912	1,898
1965	1,134	2,562	709,300	*	141,159	*	32,497	2,921	1,763	2,008	-	29,336	1,775
1966	1,237	3,336	775,245	2,235	91,414	24,686	27,791	3,008	1,884	1,984	-	30,374	1,666
1967	1,538	3,440	808,788	2,258	93,740	25,378	29,214	3,024	1,870	1,997	-	29,661	1,460
1968	1,779	3,700	848,109	2,179	102,876	26,374	31,406	3,031	1,937	1,989	-	30,082	1,063
1969	2,080	3,926	882,334	2,371	112,011	26,581	33,674	3,007	2,030	1,967	-	30,349	810
1970	2,068	3,207	916,700	2,979	123,286	27,081	35,134	2,943	2,100	1,883	-	29,890	690
1971	2,045	3,143	966,340	3,607	137,870	28,985	37,217	2,885	2,212	1,846	-	29,181	141
1972	2,042	3,317	1,021,365	4,331	156,622	31,414	40,706	2,750	2,359	1,756	-	30,309	212
1973	2,098	3,687	1,045,981	5,194	176,833	33,661	45,649	2,548	2,412	1,835	-	31,248	239
1974	1,938	3,864	1,007,251	5,442	182,757	33,441	45,966	2,610	2,450	1,907	-	30,719	260
1975	1,948	3,939	1,033,950	5,629	200,700	34,606	46,724	2,755	2,500	1,990	173	27,656	253
1976	2,052	4,172	1,078,215	6,003	225,834	36,930	49,680	2,899	2,862	2,026	173	28,530	264
1977	2,162	4,402	1,109,243	6,349	250,591	39,339	55,682	2,937	2,900	2,021	175	28,749	261
1978	2,249	4,966	1,146,508	7,158	279,414	42,747	62,992	3,085	3,000	2,216	174	28,988	255
1979	2,471	5,471	1,113,640	8,637	291,905	42,012	66,992	3,125	3,000	2,236	176	29,674	255
1980	2,523	5,204	1,111,596	10,214	290,935	39,813	68,678	3,500	3,000	2,287	179	29,277	235
1981	2,442	5,162	1,130,827	10,690	296,343	39,568	69,134	3,541	3,000	2,325	176	27,968	223
1982	2,442	4,625	1,166,256	9,910	306,141	40,212	66,668	3,577	3,000	2,318	175	23,951	217
1983	2,553	4,907	1,198,023	8,760	327,643	43,409	69,754	3,648	3,000	2,306	177	24,358	224
1984	2,875	5,059	1,224,919	9,794	357,999	46,560	77,367	3,329	3,400	2,750	168	26,409	235
1985	3,046	4,817	1,260,565	9,086	373,072	46,980	79,600	3,483	3,400	2,791	183	24,920	251
1986	3,421	4,925	1,301,214	9,397	389,047	48,308	81,833	3,565	3,700	2,986	189	24,414	250
1987	3,653	4,688	1,355,330	9,506	415,449	49,357	86,064	3,728	3,900	3,055	189	25,627	261
1988	3,738	4,766	1,429,579	10,024	439,496	51,239	90,158	3,730	4,100	3,157	202	26,339	273
1989	3,748	5,154	1,477,769	10,371	454,339	52,969	95,349	3,823	4,000	3,203	210	26,196	288
1990	3,963	4,831	1,513,184	9,557	466,092	53,443	96,367	3,936	3,800	3,242	213	26,159	305
1991	3,854	4,510	1,533,668	9,178	472,885	53,791	96,949	4,015	4,300	3,348	217	25,628	313

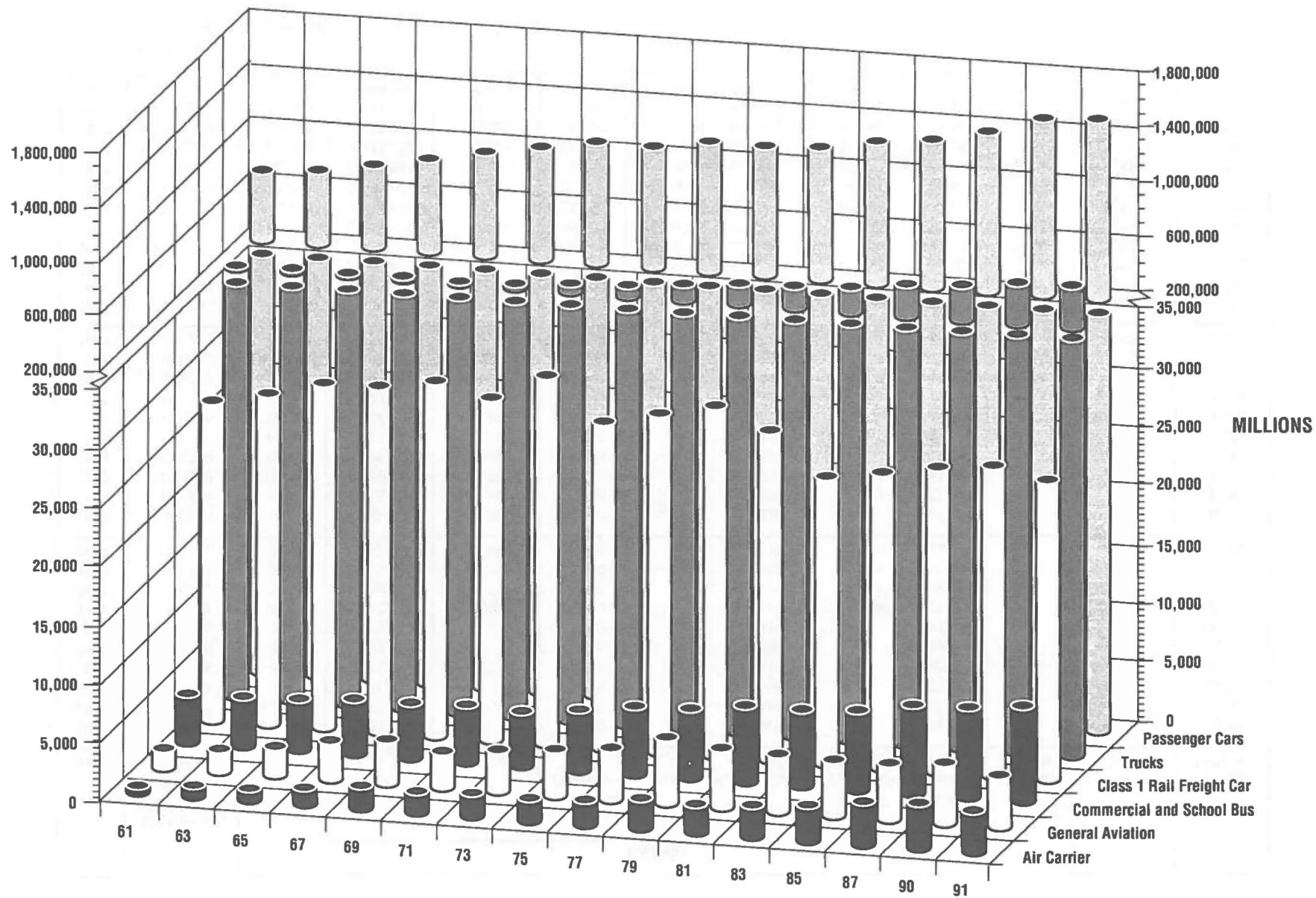
^a All operations other than those operating under 14 CFR 121 & 14 CFR 135.

^b 1960-1965, motorcycles included in passenger car and taxi figures, and other single-unit truck included in single-unit truck figures.

^c Includes Commuter Rail.

^d Amtrak, 1971-1991.

Source: See Appendix A, pp. A-13, A-14.



Source: See Table 5.

Figure 12. Vehicle-Miles, 1961-1991

Table 6. Passenger Miles, 1960-1991
(millions)

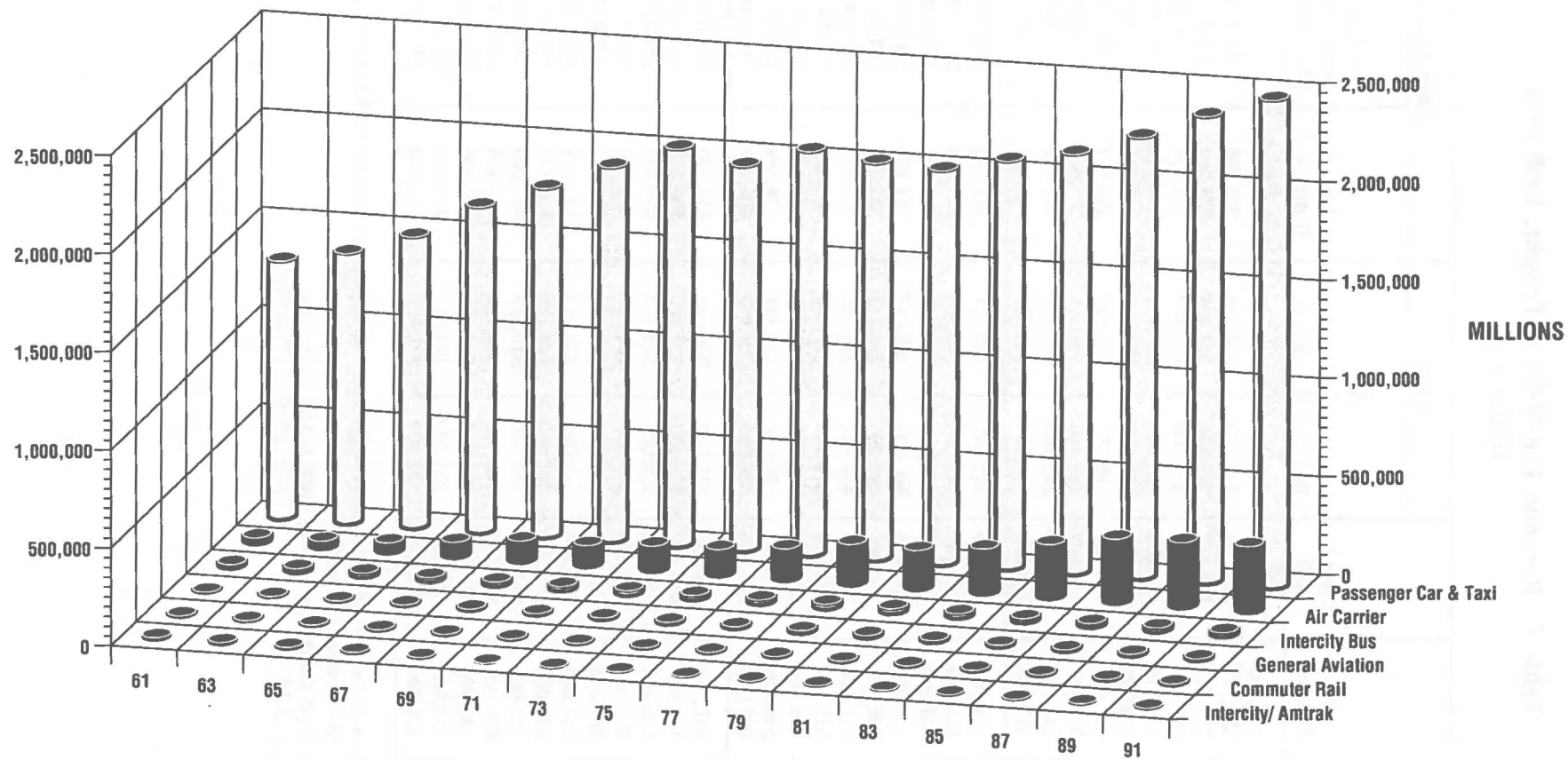
Year	Air Carrier, certificated, domestic, all services	General Aviation	Highway							Local Transit ^b	Commuter Rail	Intercity/ Amtrak ^c
			Passenger Car & Taxi	Motorcycle	Intercity Bus	School Bus	Single-Unit Trucks ^a	Other Single-Unit Trucks	Combi- nation Trucks			
1960	31,099	2,300	1,293,783	-	19,300	-	156,688	-	28,479	-	4,197	17,064
1961	31,617	2,601	1,317,934	-	20,300	-	159,341	-	28,994	-	4,132	16,154
1962	34,298	2,948	1,358,850	-	21,800	-	166,566	-	29,185	-	4,046	15,859
1963	39,016	3,278	1,381,094	-	22,500	-	199,947	-	29,816	-	4,101	14,396
1964	45,046	3,708	1,436,540	-	23,300	-	212,600	-	30,560	-	4,199	14,048
1965	53,226	4,400	1,489,530	-	23,800	-	223,031	-	32,497	-	4,128	13,260
1966	63,085	5,700	1,612,510	2,682	24,600	-	144,434	24,686	27,791	-	4,193	12,903
1967	79,522	7,000	1,666,103	2,732	24,900	-	147,172	25,378	29,214	-	4,281	10,920
1968	100,451	8,200	1,730,142	2,658	24,500	-	161,515	26,374	31,406	-	4,383	8,737
1969	109,541	8,800	1,782,315	2,916	24,900	-	174,737	26,581	33,674	-	4,546	7,623
1970	108,442	9,100	1,833,400	3,694	25,300	-	192,326	27,081	35,134	-	4,592	6,179
1971	109,804	9,200	1,913,353	4,473	25,500	-	213,699	28,985	37,217	-	4,498	1,894
1972	121,820	10,000	2,001,875	5,370	25,600	-	242,764	31,414	40,706	-	4,229	3,038
1973	130,720	10,700	2,029,203	6,493	26,400	-	274,091	33,661	45,649	-	4,245	3,807
1974	133,720	11,200	1,933,922	6,857	27,700	-	281,446	33,441	45,966	-	4,533	4,259
1975	136,000	11,400	1,964,505	7,149	25,400	-	309,078	34,606	46,724	-	4,513	3,931
1976	151,370	12,100	2,027,044	7,684	25,100	-	345,526	36,390	49,680	-	4,470	4,268
1977	163,220	12,800	2,063,192	8,127	26,000	-	383,404	39,339	55,682	30,038	4,588	4,204
1978	187,812	14,100	2,109,575	9,162	25,600	-	424,709	42,747	62,992	38,267	6,213	4,154
1979	208,891	15,500	2,026,825	11,142	27,700	-	443,696	42,012	66,992	39,646	6,492	4,867
1980	200,087	14,700	2,000,872	13,278	27,400	41,000	439,312	39,813	68,678	39,854	6,516	4,503
1981	201,438	14,600	2,012,872	14,004	27,100	41,200	447,472	39,568	69,134	38,482	6,236	4,762
1982	213,631	13,100	2,052,611	13,081	26,900	40,800	459,212	40,212	66,668	37,124	6,027	4,172
1983	232,165	12,700	2,084,560	11,563	25,600	62,400	491,465	43,409	69,754	37,602	6,097	4,246
1984	250,687	13,000	2,106,861	13,026	24,600	78,300	536,999	46,560	77,367	39,424	6,207	4,552
1985	277,836	12,300	2,142,961	12,084	23,800	70,000	555,877	46,980	79,600	39,581	6,534	4,785
1986	307,885	12,400	2,186,040	12,592	23,700	89,100	579,680	48,308	81,833	40,204	6,723	5,011
1987	329,215	12,100	2,249,848	12,833	23,000	72,900	614,865	49,537	86,064	40,348	6,818	5,361
1988	334,291	12,600	2,344,510	13,633	23,100	83,200	650,454	51,239	90,158	40,580	6,964	5,686
1989	335,214	13,100	2,379,208	14,208	24,000	80,600	667,878	52,969	95,349	41,603	7,211	5,840
1990	345,873	13,000	2,451,358	13,093	23,000	74,200	685,155	53,443	96,367	41,143	7,082	6,041
1991	338,085	12,600	2,484,542	12,574	23,500	83,300	695,141	53,791	96,949	40,860	7,384	6,274

^a 2-axle, 4-tire trucks.

^b Includes Commuter Rail.

^c Amtrak, 1971-1991.

Source: See Appendix A, pp. A-14, A-15.



Source: See Table 6.

Figure 13. Passenger-Miles, 1961-1991

Table 7. Revenue Ton-Miles of Freight, 1960-1991
(millions)

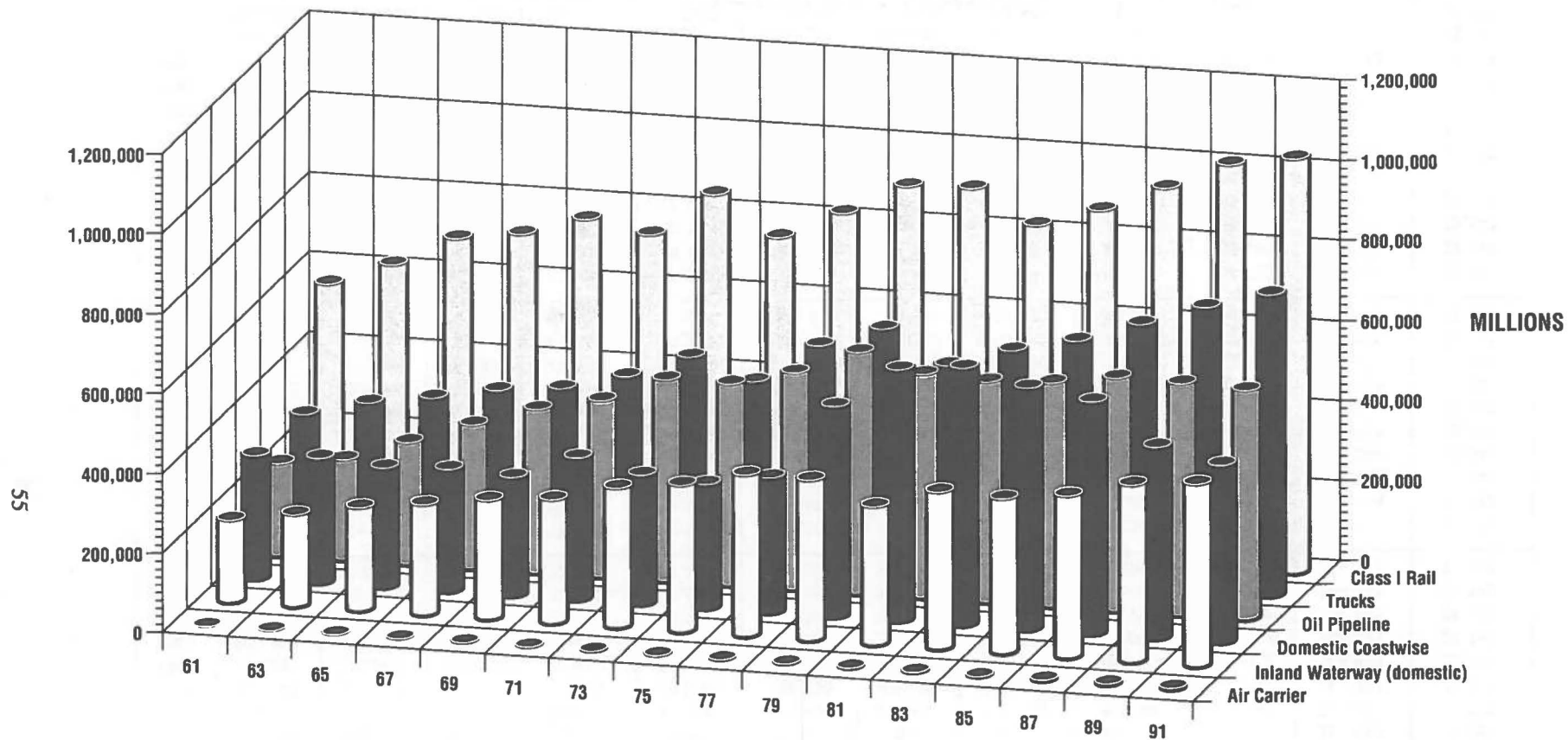
Year	Air Carrier, certificated, domestic, all services ^a	Oil Pipeline	Class I Rail	Trucks		Water Transport		
				Intercity	Local	Inland Waterways ^b	Inland Waterways (dom. only)	Domestic Coastwise
1960	600	233,000	572,309	285,000	100,250	210,000	-	256,000
1961	867	233,172	563,361	296,000	110,349	209,706	151,000	312,000
1962	1,155	237,723	592,862	309,000	118,994	223,089	156,000	318,000
1963	1,099	253,431	621,737	336,000	132,440	234,172	162,000	316,000
1964	1,294	268,655	658,639	356,000	135,313	250,165	175,000	312,000
1965	1,670	306,393	697,878	359,000	139,353	262,421	186,000	303,000
1966	1,985	332,916	738,395	380,917	124,824	280,527	198,000	307,000
1967	2,310	361,041	719,498	388,500	136,316	281,000	203,000	310,000
1968	2,590	391,300	744,023	396,300	149,689	291,409	214,000	304,000
1969	3,295	411,000	767,841	404,000	163,795	302,901	227,000	301,000
1970	3,010	431,100	764,809	412,000	178,017	318,560	235,000	360,000
1971	3,151	444,000	739,743	445,000	200,369	315,030	231,000	360,000
1972	3,402	475,800	776,746	470,000	230,889	338,693	251,000	352,000
1973	3,662	507,000	851,809	505,000	206,637	354,882	256,000	328,000
1974	3,632	506,000	850,961	495,000	212,718	342,210	262,000	323,000
1975	3,470	507,000	754,252	454,000	225,932	372,865	249,000	316,000
1976	3,664	515,000	794,059	510,000	235,035	368,275	268,000	323,000
1977	3,947	546,000	826,292	555,000	202,941	409,316	254,000	343,000
1978	4,371	586,000	857,921	599,000	219,353	424,569	285,000	540,000 ^c
1979	4,407	608,000	904,956	608,000	227,123	406,879	295,000	532,000
1980	4,528	588,000	918,958	555,000	246,406	410,240	289,000	631,000
1981	4,657	564,000	910,169	527,000	261,800	351,280	293,000	635,000
1982	4,476	566,000	797,759	520,000	273,623	359,013	253,000	633,000
1983	5,055	556,000	828,275	575,000	294,447	398,879	269,000	650,000
1984	5,493	568,000	921,542	606,000	343,554	381,693	293,000	594,000
1985	5,156	564,000	876,984	610,000	326,668	392,604	281,000	611,000
1986	6,356	578,000	867,722	632,000	318,126	410,737	291,000	581,000
1987	7,589	587,000	943,747	663,000	341,815	411,000	307,000	587,000
1988	8,169	601,000	996,182	700,000	369,720	438,000	327,000	562,000
1989	8,954	584,000	1,013,841	716,000	384,610	449,000	329,000	484,000
1990	9,064	584,000	1,033,969	735,000	384,687	464,000	339,000	470,000
1991	8,858	578,000	1,038,875	758,000	391,963	462,000	339,000	450,000

^a Includes revenue ton-miles of freight, U.S. and foreign mail, and express, as reported on RSPA/OAS Form 41.

^b Includes domestic and foreign U.S. traffic.

^c Reflects entrance of Alaska pipeline moving crude to U.S. refineries.

Source: See Appendix A, p. A-15.



Source: See Table 7.

Figure 14. Revenue Ton-Miles of Freight, 1961-1991

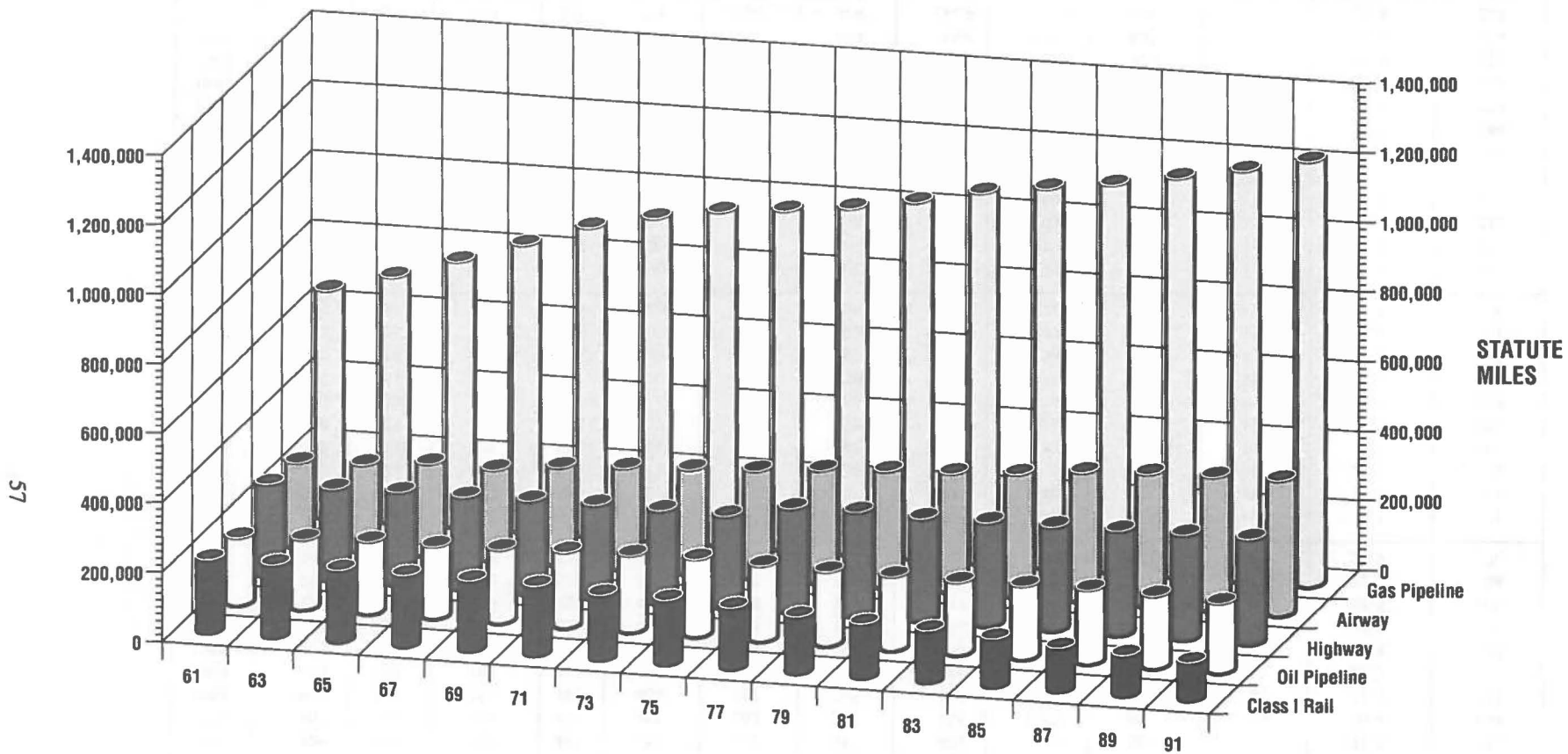
Table 8. Basic Intercity Mileage Within the Continental United States, 1960-1991
(statute miles)

Year	Airway	Oil Pipeline ^a				Gas Pipeline				Class I Rail	Highway ^b	Inland Waterway
		Total	Crude Lines		Product Lines	Total	Distribu- tion Mains	Trans- mission Pipelines	Field and Gathering Lines			
			Trunk	Gathering								
1960	293,003	190,944	67,200	72,800	49,859	630,900	391,400	183,700	55,800	217,552	265,477	25,253
1961	245,620	195,774	69,237	75,007	51,530	659,000	410,400	191,000	56,700	216,445	266,344	25,260
1962	248,270	200,543	70,355	76,988	53,200	683,200	428,100	196,400	58,700	215,090	265,489	25,260
1963	252,325	203,985	71,058	76,979	55,948	709,900	448,300	200,900	60,700	214,387	265,489	25,260
1964	263,348	207,427	71,391	77,340	58,696	736,200	469,800	205,400	61,000	212,603	267,774	25,380
1965	268,275	210,867	72,383	77,041	61,443	767,500	494,500	211,300	61,700	211,925	268,898	25,380
1966	259,083	210,404	72,487	75,445	62,472	799,600	519,600	217,000	63,000	211,107	268,427	25,380
1967	264,165	209,941	71,756	74,684	63,501	828,300	537,200	225,400	63,700	209,826	268,185	25,380
1968	277,554	209,478	70,825	74,124	64,529	861,600	562,700	234,500	64,400	208,648	268,911	25,380
1969	283,861	214,075	72,806	72,806	68,463	891,600	578,600	248,100	64,900	207,526	270,071	25,545
1970	291,122	218,671	75,143	71,132	72,396	913,300	594,800	252,200	66,300	206,625	271,517	25,543
1971	295,192	219,899	74,468	71,548	73,883	931,400	610,400	254,800	66,200	205,220	271,714	25,543
1972	300,017	221,127	75,065	70,692	75,370	948,100	623,100	258,100	66,900	203,299	270,259	25,543
1973	304,152	223,535	75,658	69,839	78,038	962,900	633,800	263,100	65,900	192,813	268,364	25,543
1974	307,675	224,712	76,434	69,154	79,124	974,100	645,600	262,200	66,400	192,991	267,756	25,543
1975	313,178	225,889	77,210	68,469	80,210	979,300	648,200	262,600	68,500	191,520	265,905	25,543
1976	322,662	227,066	77,972	67,798	81,296	987,700	659,100	258,200	70,300	182,395	298,715	25,543
1977	327,937	220,058	78,483	66,580	74,995	998,900	666,900	260,500	71,500	182,380	300,434	25,543
1978	333,734	218,165	75,483	65,368	77,314	1,013,000	677,500	260,600	74,900	177,710	301,638	25,543
1979	338,133	215,960	71,876	58,179	85,905	1,029,800	688,500	263,500	77,800	169,927	303,491	25,543
1980	341,823	218,393	71,568	58,263	88,562	1,051,774	701,800	266,500	83,500	164,822	300,456	25,543
1981	344,578	215,041	68,486	57,099	89,456	1,069,800	714,100	269,500	86,200	162,160	298,256	25,543
1982	352,292	213,677	69,529	53,421	90,727	1,083,466	720,900	271,700	90,500	159,123	298,219	25,543
1983	355,599	211,930	67,304	51,177	93,449	1,095,118	729,728	273,506	91,884	155,879	300,040	25,777
1984	360,346	215,317	67,910	51,996	95,411	1,102,401	736,800	271,900	93,700	151,998	300,018	25,777
1985	373,891	213,605	66,076	51,736	95,793	1,118,875	753,391	271,162	94,322	145,764	301,006	25,777
1986	381,094	214,788	66,499	55,600	92,689	1,134,110	769,319	270,967	93,770	140,061	303,233	25,777
1987	382,503	215,914	66,911	55,044	93,959	1,151,159	783,796	271,894	95,469	132,220	302,448	25,777
1988	384,691	214,084	66,643	56,668	91,773	1,167,797	800,360	275,129	92,308	127,555	303,698	25,777
1989	386,889	211,522	63,410	54,165	90,947	1,185,015	818,132	276,329	90,554	124,236	304,054	25,777
1990	388,000	208,752	65,507	53,298	89,947	1,206,274	836,667	280,108	89,499	119,758	305,347	25,777
1991	390,000	203,828	65,920	49,940	87,968	1,225,270	857,417	281,591	86,262	116,626	305,226	25,777

^a Includes petroleum and other liquid product lines, including gathering lines.

^b Federal-Aid primary roads only.

Source: See Appendix A, pp. A-15, A-16.



Source: See Table 8.

Figure 15. Basic Intercity Mileage Within the Continental United States, 1961-1991

Table 9. Average Length of Haul, Domestic Interstate Freight and Passenger Modes, 1960-1991 (miles)

Year	Freight									Passenger			
	Air Carrier	Oil Pipeline		Railroads		Trucks ^a	Water			Air Carrier, scheduled	Bus, intercity	Commuter Rail	Intercity/ Amtrak
		Crude	Products	All	Per System		Rivers/ Canals	Great Lakes	Coast-wise				
1960	953	325	269	489	442	272	282	522	1,496	583	79	20.7	130
1961	906	320	266	481	452	267	287	488	1,508	589	78	21.2	132
1962	867	311	263	474	461	263	284	486	1,474	601	84	20.9	134
1963	905	314	261	486	464	267	285	482	1,478	602	87	21.0	125
1964	940	308	280	481	466	256	285	484	1,516	605	92	21.2	122
1965	943	320	335	520	477	259	297	494	1,501	614	94	21.4	125
1966	961	323	351	529	484	263	301	496	1,472	620	95	21.5	122
1967	993	311	396	532	485	256	322	487	1,446	635	95	21.5	108
1968	993	297	372	539	495	258	324	498	1,421	651	92	21.5	88
1969	1,147	297	366	541	497	261	313	513	1,389	674	105	21.9	76
1970	1,014	300	357	546	490	365	330	506	1,509	679	106	22.3	71
1971	1,023	301	347	550	507	382	337	499	1,483	681	107	22.4	68
1972	992	583	492	543	511	389	350	504	1,449	685	107	22.2	188
1973	1,022	613	488	556	531	397	342	535	1,384	689	116	22.8	183
1974	1,050	653	483	572	527	432	359	540	1,383	684	120	23.0	224
1975	1,082	633	516	576	516	446	358	530	1,362	698	113	23.2	233
1976	1,075	661	446	551	540	455	376	535	1,367	704	119	23.1	224
1977	1,086	710	417	554	549	457	382	481	1,385	705	127	23.2	229
1978	1,115	803	423	586	607	462	392	535	1,770	719	124	23.4	221
1979	1,167	851	436	579	580	466	406	543	1,747	714	125	23.5	226
1980	1,052	871	414	586	590	490	405	536	1,915	736	125	23.3	217
1981	1,241	834	424	597	600	497	444	539	1,972	749	123	23.3	226
1982	1,224	804	422	600	604	513	438	494	2,034	766	133	23.3	215
1983	1,249	790	398	611	613	524	463	516	2,098	765	138	23.3	223
1984	1,204	798	399	614	617	532	448	508	1,931	759	133	23.2	227
1985	1,157	777	391	617	635	538	435	524	1,972	758	121	23.8	232
1986	1,165	797	395	613	665	558	443	495	1,886	767	123	22.0	249
1987	1,275	834	386	630	688	546	452	519	1,814	779	127	21.9	259
1988	1,333	846	384	633	697	548	458	530	1,727	786	130	21.4	265
1989	1,399	831	389	650	723	558	449	535	1,602	793	131	21.9	276
1990	1,389	804	389	646	726	571	449	546 ^c	1,604	803	141	21.6	274
1991	1,380	824	378	621	751	589	449 ^a	540 ^c	1,585 ^c	806	143	22.8	288

^c estimate.

^a 1960-1969 are Class 1 only. Amtrak, 1971-1991.

Source: Eno Foundation for Transportation, *Transportation In America*, 1993, pp. 70, 71.

Transportation Association of America, *Transportation Facts and Trends*, (1960-1964 passenger data only).

Transportation Policy Associates, Oil Pipeline data, 1960-1971, personal communication.

Table 10. Number of Vehicles, 1960-1991 (page 1 of 2)

Year	Air Carrier, certificated, all services	General Aviation	Motor- cycle	Passenger Car & Taxi (thousands)	Truck		Intercity Bus	Local Transit ^a						Com- muter Rail
					Single- Unit	Combi- nation		Motor Bus	Heavy Rail	Light Rail	Trolley Bus	Demand Response	Other	
1960	2,135	76,549	574,080	61,684	-	-	20,080	49,600	9,010	2,856	3,826	-	-	-
1961	2,216	79,611	595,669	63,274	-	-	20,490	49,000	9,078	2,341	3,593	-	-	-
1962	2,173	84,121	660,400	65,978	-	-	21,160	48,800	8,865	2,219	3,161	-	-	-
1963	-	85,088	786,318	69,056	12,654,000	706,000	21,100	49,400	8,878	1,756	2,155	-	-	-
1964	2,124	88,742	984,763	71,984	13,275,000	738,000	21,500	49,200	9,061	1,553	1,865	-	-	-
1965	-	95,442	1,381,956	75,261	14,008,000	787,000	20,600	49,600	9,115	1,549	1,453	-	-	-
1966	2,319	104,706	1,752,801	78,125	14,694,000	823,000	21,500	50,130	9,273	1,407	1,326	-	-	-
1967	-	114,186	1,953,022	80,399	15,363,000	830,000	21,900	50,180	9,257	1,388	1,244	-	-	-
1968	2,638	124,237	2,100,547	83,605	16,124,000	871,000	22,100	50,000	9,390	1,355	1,185	-	-	-
1969	-	130,806	2,315,916	86,858	16,942,000	929,000	21,600	49,600	9,343	1,322	1,082	-	-	-
1970	2,690	131,743	2,814,730	89,244	17,778,000	960,000	22,000	49,700	9,286	1,262	1,050	-	-	-
1971	2,720	131,148	3,345,179	92,718	18,828,000	974,000	21,900	49,150	9,325	1,225	1,037	-	-	-
1972	2,674	145,010	3,774,996	97,082	20,249,000	990,000	21,400	49,075	9,423	1,176	1,030	-	-	-
1973	2,600	153,540	4,332,580	101,985	22,205,000	1,028,000	20,800	48,286	9,387	1,123	794	-	-	-
1974	2,513	161,502	4,966,399	104,856	23,545,200	1,085,000	21,000	48,700	9,403	1,068	718	-	-	-
1975	2,540	168,475	4,966,844	106,706	24,644,700	1,131,000	20,500	50,811	9,608	1,061	703	-	-	-
1976	2,510	178,304	4,933,332	110,189	26,554,071	1,224,810	20,100	52,382	9,714	963	685	-	-	4,490
1977	2,543	184,294	4,933,256	112,288	28,298,394	1,264,091	20,100	51,968	9,639	992	645	-	-	4,392
1978	2,527	198,778	4,867,864	116,573	30,366,022	1,366,582	20,200	52,866	9,567	944	593	-	-	4,525
1979	2,598	210,339	5,422,132	118,429	32,010,742	1,399,000	20,500	54,490	9,522	959	682	-	-	4,402
1980	2,818	211,045	5,693,940	121,601	32,249,718	1,416,869	21,400	59,411	9,641	1,013	823	-	-	4,500
1981	2,763	213,226	5,831,132	123,098	33,382,908	1,261,202	21,500	60,393	9,749	1,075	751	-	-	4,465
1982	2,664	209,779	5,753,858	123,702	34,117,054	1,265,321	22,000	62,114	9,815	1,016	763	-	-	4,497
1983	2,659	213,293	5,585,112	126,444	35,418,574	1,304,041	20,300	62,093	9,891	1,013	686	-	-	4,423
1984	2,757	220,943	5,479,822	128,158	36,167,319	1,340,144	20,100	67,294	9,083	733	664	14,164	888	4,075
1985	3,100	210,654	5,444,404	131,864	37,792,895	1,403,266	20,200	64,258	9,326	717	676	14,490	867	4,035
1986	3,627	220,044	5,262,322	135,431	38,670,542	1,398,937	20,300	66,218	10,386	697	680	15,346	942	4,440
1987	3,698	217,183	4,917,131	137,208	39,725,054	1,419,400	20,097	63,017	10,168	766	671	15,944	875	4,686
1988	4,188	210,266	4,584,284	141,252	41,053,127	1,476,241	19,887	62,572	10,539	831	710	16,812	1,096	4,649
1989	4,348	219,737	4,433,915	143,026	42,020,564	1,589,285	19,688	58,919	10,506	755	725	15,856	1,060	4,472
1990	4,727	212,229	4,259,462	143,453	43,101,594	1,611,293	19,491	59,714	10,419	913	832	16,471	1,197	4,415
1991	4,580	198,474	4,177,037	142,956	43,180,698	1,604,335	19,296	57,865	10,170	1,058	919	17,222	1,448	4,550

Table 10. Number of Vehicles, 1960-1991 (page 2 of 2)

Year	Class I Rail		Amtrak		Water Transport				
					Non-Self-Propelled Vessels			Self-Propelled Vessels	Oceangoing Steam and Motor Ships (1,000 gross tons & over)
	Freight Cars	Locomotives	Passenger Train-cars	Locomotives	Total Inland Water Vessels	Dry Cargo Barges & Scows	Tankers	Towboats & Tugs	
1960	1,636,326	29,031	-	-	20,657	14,025	2,429	4,203	957
1961	1,604,241	28,815	-	-	20,549	13,856	2,515	4,178	903
1962	1,550,067	28,639	-	-	21,194	14,280	2,661	4,253	822
1963	1,512,306	28,449	-	-	21,359	14,415	2,739	4,205	904
1964	1,488,385	28,300	-	-	21,075	14,432	2,649	3,994	885
1965	1,478,005	27,816	-	-	20,843	14,241	2,548	4,054	2,376
1966	1,488,115	27,886	-	-	20,843	14,241	2,548	4,054	2,278
1967	1,477,166	27,687	-	-	23,006	15,830	2,781	4,395	2,162
1968	1,453,883	27,376	-	-	22,664	15,379	3,001	4,284	2,071
1969	1,434,824	27,033	-	-	22,664	15,379	3,001	4,281	1,937
1970	1,423,921	27,086	-	-	22,908	15,379	3,281	4,248	1,579
1971	1,410,160	27,189	1,165	-	23,854	16,439	3,185	4,230	1,372
1972	1,381,038	27,073	1,571	285	25,006	17,527	3,420	4,059	1,150
1973	1,356,944	27,453	1,777	352	26,181	18,804	3,313	4,064	1,016
1974	1,339,223	27,627	1,908	457	27,182	19,772	3,375	4,035	922
1975	1,314,135	27,846	1,913	355	29,510	21,876	3,534	4,100	857
1976	1,268,735	27,215	2,062	379	31,027	23,164	3,623	4,240	842
1977	1,232,080	27,283	2,154	369	33,149	24,937	3,770	4,379	840
1978	1,166,517	26,960	2,084	441	32,428	24,037	3,946	4,380	879
1979	1,118,381	27,043	2,026	437	33,984	25,420	4,000	4,492	865
1980	1,168,114	28,094	2,128	419	36,285	27,426	4,166	4,693	864
1981	1,111,115	27,421	1,830	385	*	*	*	*	853
1982	1,039,016	26,795	1,929	396	38,782	29,479	4,413	4,890	832
1983	1,007,165	25,448	1,880	388	*	*	*	*	788
1984	948,171	24,117	1,844	387	38,837	29,730	4,114	4,993	744
1985	867,070	22,548	1,818	382	38,493	29,287	4,252	4,954	737
1986	798,631	20,790	1,793	369	37,664	28,308	4,260	5,096	720
1987	748,523	19,358	1,850	381	37,159	27,741	4,247	5,171	709
1988	724,840	19,364	1,853	318	36,277	27,046	4,043	5,188	675
1989	682,270	19,015	1,912	312	36,293	27,073	3,978	5,242	655
1990	658,902	18,835	1,983	318	36,222	27,091	3,913	5,218	636
1991	633,489	18,344	1,967	316	*	*	*	*	619

* Prior to 1984, excludes most rural and smaller systems funded via Sections 18 and 16(b)(2), Urban Mass Transportation Act of 1964, as amended. Also prior to 1984, includes total vehicles owned and leased. Series not continuous between 1983 and 1984.

* 1981 data included in 1982 figure; 1983 data included in 1984 figure; data for January 1, 1991 - June 30, 1991 included in 1990 figure.

Source: See Appendix A, pp. A-16, A-17.

Table 11. Number of New Vehicles Purchased by Mode, 1960-1991

Year	Air Carrier (all services) Fixed Wing	General Aviation	Passenger Car & Taxi ^a	Motor- cycle	Moped	Bicycle ^a	Truck (domestic)	Bus (including school bus)	Local Transit				Com- muter Rail	Class I Rail		Amtrak		Water Transport	
									Motor Bus ^b	Light Rail	Heavy Rail	Trolley Bus		Freight Car ^c	Loco- motive	Passenger Train- Car	Loco- motive	Merchant Vessel	Gross Tonnage
1960	245	7,588	6,529,900	-	-	-	1,194,475	32,056	2,415	0	416	0	214	57,047	389	-	-	20	319,991
1961	198	6,778	5,402,300	-	-	-	1,133,804	30,000	2,200	0	468	0	190	31,501	288	-	-	24	355,337
1962	134	6,697	6,753,100	-	-	-	1,240,168	31,700	2,000	0	406	0	304	36,454	764	-	-	28	404,385
1963	100	7,569	7,443,000	-	-	-	1,462,708	32,900	3,200	0	658	0	156	44,804	834	-	-	-	-
1964	163	9,336	7,554,000	-	-	-	1,540,453	30,400	2,500	0	640	0	399	69,051	1,071	-	-	15	213,404
1965	233	11,852	9,101,000	-	-	-	1,751,805	33,000	3,000	0	580	0	666	77,822	1,387	-	-	13	172,687
1966	344	15,747	8,337,000	-	-	-	1,731,084	33,600	3,100	0	179	0	113	89,899	1,419	-	-	13	146,063
1967	500	13,536	7,568,000	-	-	-	1,539,462	32,731	2,500	0	85	0	146	70,096	1,109	-	-	-	-
1968	702	13,749	8,625,000	-	-	7,500,000	1,896,078	32,958	2,228	0	384	0	65	46,810	978	-	-	-	-
1969	509	12,581	8,464,000	680,000	-	7,100,000	1,936,000	33,886	2,230	0	650	0	240	53,200	1,158	-	-	-	-
1970	311	7,384	7,119,000	1,125,000	-	6,900,000	1,746,000	33,500	1,424	0	308	0	302	66,185	1,029	-	-	13	342,000
1971	230	7,450	8,681,000	1,565,000	-	8,900,000	2,011,000	33,906	2,514	0	250	1	281	55,046	1,179	-	-	15	419,000
1972	230	9,765	9,327,000	1,725,000	-	13,900,000	2,486,000	35,298	2,904	0	360	1	334	47,322	1,377	0	0	15	439,000
1973	295	13,671	9,676,000	1,255,000	-	15,200,000	2,915,000	35,768	3,200	0	238	1	83	58,634	1,210	0	67	30	987,000
1974	263	14,026	7,454,000	1,580,000	13,000	14,100,000	2,511,000	38,472	4,818	0	92	0	85	66,798	1,131	0	362	20	697,000
1975	314	14,043	7,053,000	990,000	32,000	7,300,000	2,248,000	40,530	5,261	0	127	1	265	72,392	772	109	30	15	452,000
1976	238	15,648	8,611,000	740,000	78,000	8,100,000	2,944,000	33,801	4,745	4	472	260	349	52,323	488	305	58	16	616,000
1977	180	16,624	9,109,000	970,000	190,000	9,400,000	3,353,000	31,668	2,437	62	506	198	153	51,639	820	133	4	18	920,198
1978	225	16,456	9,312,000	1,015,000	350,000	9,400,000	3,920,860	35,342	3,805	35	172	0	43	67,440	1,224	1	75	14	911,791
1979	160	17,048	10,588,000	1,010,000	130,000	10,800,000	3,120,159	32,498	3,440	70	94	141	99	95,836	1,724	56	39	15	1,148,530
1980	387	11,777	8,980,000	1,070,000	182,037	9,000,000	2,231,500	34,385	4,572	32	130	98	152	85,920	1,480	108	17	23	693,200
1981	387	10,114	8,535,000	1,065,000	67,779	8,900,000	1,972,200	27,295	4,059	188	276	0	119	44,901	479	119	43	12	427,979
1982	232	4,053	7,980,000	990,000	18,145	6,800,000	2,247,800	26,260	2,962	10	126	0	102	17,236	324	101	35	11	342,000
1983	262	2,784	9,179,000	1,185,000	21,645	9,000,000	2,709,400	26,212	4,081	30	88	0	115	5,772	200	31	0	14	409,100
1984	185	2,635	10,394,000	1,305,000	32,889	10,100,000	3,485,000	32,437	3,894	59	521	0	128	12,396	436	0	0	12	389,900
1985	278	2,457	11,039,000	1,260,000	30,174	11,400,000	3,913,200	33,533	3,367	63	441	0	179	12,080	522	74	0	14	581,300
1986	330	2,888	11,450,000	1,075,000	22,557	12,300,000	3,947,200	37,022	3,379	149	854	0	140	11,508	280	0	0	8	321,100
1987	357	2,319	10,278,000	970,000	23,683	12,600,000	4,088,400	37,085	4,224	51	758	47	272	13,645	131	0	0	12	470,500
1988	423	2,681	10,639,000	710,000	9,628	9,900,000	4,544,500	33,632	3,548	24	311	4	74	22,524	356	0	0	5	251,000
1989	398	3,129	9,903,000	515,000	11,587	10,700,000	4,941,500 ^a	30,582	4,960	52	207	0	160	29,617	609	45	13	0	0
1990	521	2,785	9,499,000	462,000	12,950	10,800,000	4,649,900 ^a	32,731	4,779	55	10	118	83	32,063	530	129	14	0	0
1991	589	2,898	8,388,000	430,000	3,553	11,600,000	4,156,000 ^a	24,058	4,942	17	-6	149	187	24,678	472	10	20	0	0

^a Includes domestic and imported vehicles.

^b Buses or bus-type vehicles only. Excludes most rural and smaller systems prior to 1984. Series not continuous between 1983 and 1984.

^c Freight car includes all railroads and private car owners.

Source: See Appendix A, pp. A-17, A-18.

Table 12. U.S. Automobiles in Fleets by Type of Use, 1964-1991
(thousands)

Year	Use							Total (Cars in fleets of 10 or more)	(Cars in fleets of 4 or more)
	Business Fleets ^a	Individually Leased	Government ^b	Utilities	Police	Taxi	Daily Rental		
1964	657	290	1,025	360	156	134	132	-	8,420
1965	716	323	880	366	158	136	139	-	8,535
1966	2,159	395	660	374	165	142	180	4,106	8,710
1967	2,238	487	588	386	174	146	204	4,254	8,940
1968	2,381	573	592	394	185	153	241	4,548	9,166
1969	2,510	697	594	404	191	169	297	4,889	9,780
1970	2,529	803	674	416	207	171	314	5,114	9,992
1971	2,573	834	695	421	218	174	319	5,234	10,070
1972	2,664	925	670	438	236	177	341	5,451	10,094
1973	2,890	974	686	467	249	182	364	5,812	10,214
1974	2,928	1,008	701	482	261	185	361	5,926	10,324
1975	2,934	1,072	715	497	278	193	354	6,043	10,398
1976	3,066	1,217	727	508	286	202	373	6,379	10,403
1977	3,093	1,385	735	518	292	202	385	6,610	10,414
1978	3,148	1,610	747	523	294	205	448	6,975	10,423
1979	3,195	1,690	752	529	291	207	462	7,126	10,428
1980	3,279	1,708	752	532	288	205	500	7,264	10,433
1981	3,306	1,713	757	537	284	198	462	7,257	10,436
1982	3,324	1,645	603	530	223	141	457	6,923	10,076
1983	3,383	1,653	606	533	221	139	466	7,001	10,400
1984	3,422	1,657	638	540	228	140	755 ^c	7,380	10,475
1985	3,484	1,800	643	540	233	140	760	7,600	10,508
1986	3,530	1,975	647	545	238	143	790	7,868	10,508
1987	3,564	2,098	650	550	240	144	800	8,046	10,578
1988	3,689	2,160	658	553	242	144	870	8,316	10,597
1989	3,787	2,140	658 ^d	553	244	144	907	8,433	10,592
1990	3,823	2,020	653 ^d	551	249	141	990	8,427	10,607
1991	3,446	2,008	619 ^d	544	250	141	1,160	8,188	10,514

^a Includes driver schools.

^b Data from *Automotive Fleet Fact Book* does not include all Federal Government fleet vehicles. Federal fleet data are added from *Federal Motor Vehicle Fleet Report*, General Services Administration, Table 1 (all agencies — domestic sedans and station wagons).

^c Major adjustment by *Automotive Fleet Fact Book* with new data for 1984. Daily rentals were underestimated from 1970 to 1983.

^d Federal government data for 1989-1991 are not available; therefore, the data are assumed to be equal to the 1988 Federal government figures.

Source: Oak Ridge National Laboratory, *Transportation Energy Data Book*, edition 13, Table 3.34, and similar table in earlier editions.

Table 13. Speed Trend Characteristics¹, FY 1976-1991

HIGHWAY CATEGORIES	1976	1978	1980	1982	1984	1986	1988	1990	1991
AVERAGE SPEED									
Urban Interstate	56.1	56.7	55.4	56.3	57.2	57.4	58.6	58.6	58.8
Urban Other Freeways & Expressways	-	-	-	56.0	56.6	56.7	57.5	57.6	58.0
Urban Other Principal & Minor Arterials	-	-	-	51.5	52.9	53.5	53.9	54.1	54.0
Rural Interstate	58.2	58.8	57.5	59.0	59.3	59.7	59.5	60.4	59.9
Rural Other Principal & Minor Arterials	-	-	-	54.3	54.9	55.3	56.0	56.4	56.4
Rural Major Collectors	-	-	-	51.6	52.1	52.9	53.6	54.3	54.3
MEDIAN SPEED (MPH)²									
Urban Interstate	56.1	56.5	-	56.4	57.3	57.7	58.7	58.7	58.8
Urban Other Freeways & Expressways	-	-	-	56.2	56.7	56.8	57.7	57.7	58.0
Urban Other Principal & Minor Arterials	-	-	-	51.7	53.0	53.5	54.4	54.1	53.9
Rural Interstate	57.9	58.6	-	58.9	59.2	59.7	59.6	60.2	59.4
Urban Other Principal & Minor Arterials	-	-	-	54.4	55.0	55.3	56.2	56.4	56.3
Rural Major Collectors	-	-	-	51.8	52.3	52.9	54.0	54.6	54.5
85TH PERCENTILE (MPH)³									
Urban Interstate	60.9	61.4	60.1	62.7	63.7	64.3	65.6	65.8	66.1
Urban Other Freeways & Expressways	-	-	-	62.1	63.0	63.2	64.2	64.6	64.9
Urban Other Principal & Minor Arterials	-	-	-	58.6	59.3	60.1	60.7	61.1	60.8
Rural Interstate	61.8	63.7	62.1	65.1	65.6	66.2	66.4	67.6	67.2
Urban Other Principal & Minor Arterials	-	-	-	61.1	61.5	62.2	62.8	63.2	63.1
Rural Major Collectors	-	-	-	59.4	59.8	60.6	61.4	62.0	62.1
PERCENT EXCEEDING 55 MPH									
Urban Interstate	57.0	60.0	51.2	58.4	63.3	64.8	69.7	69.8	69.8
Urban Other Freeways & Expressways	-	-	-	53.8	59.0	59.6	64.7	65.0	66.5
Urban Other Principal & Minor Arterials	-	-	-	32.4	37.6	40.7	42.6	43.6	42.2
Rural Interstate	69.0	74.0	65.9	73.1	75.1	76.2	74.0	77.6	75.5
Rural Other Principal & Minor Arterials	-	-	-	46.2	49.8	52.4	54.9	56.3	56.5
Rural Major Collectors	-	-	-	34.8	35.6	40.9	42.8	45.4	46.7
PERCENT EXCEEDING 60 MPH									
Urban Interstate	20.0	23.0	15.6	25.2	30.7	33.5	39.9	40.7	41.4
Urban Other Freeways & Expressways	-	-	-	23.2	27.4	28.8	33.0	34.2	35.3
Urban Other Principal & Minor Arterials	-	-	-	11.6	13.2	15.8	17.5	18.8	18.2
Rural Interstate	32.0	36.0	25.3	39.6	43.4	45.5	45.5	50.4	47.6
Rural Other Principal & Minor Arterials	-	-	-	19.1	20.4	22.5	24.9	27.1	26.8
Rural Major Collectors	-	-	-	14.8	14.8	17.5	18.4	20.7	21.7
PERCENT EXCEEDING 65 MPH									
Urban Interstate	5.0	5.0	3.2	7.4	9.9	12.0	15.9	17.1	18.0
Urban Other Freeways & Expressways	-	-	-	6.3	8.3	9.1	11.1	12.0	12.5
Urban Other Principal & Minor Arterials	-	-	-	3.5	3.2	4.4	5.0	5.8	5.7
Rural Interstate	10.0	10.0	6.5	13.9	16.0	18.2	18.8	23.2	20.9
Rural Other Principal & Minor Arterials	-	-	-	6.2	6.4	7.3	8.5	9.6	9.2
Rural Major Collectors	-	-	-	5.6	5.3	6.3	6.6	7.4	7.9

¹ Data in this table are only for highways with a 55 mph speed limit.

² Median speed is the speed at or below which 50 percent of the vehicles are traveling.

³ 85th percentile speed is the speed at or below which 85 percent of the vehicles are traveling.

Source: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Tables VS-1, VS-2.

Table 14. Air Travel Arrivals Between the United States and Foreign Countries, 1975-1991
(thousands)

	1975	1977	1979	1981	1983	1985	1987	1989	1990	1991
Total Passengers	12,646	14,701	19,268	20,881	20,840	24,156	28,644	33,217	36,414	35,464
Flag of Carrier:										
United States	6,502	7,487	9,864	10,265	10,698	11,798	14,313	17,174	19,145	18,910
Foreign	6,144	7,214	9,404	10,615	10,142	12,357	14,331	16,044	17,269	16,554
Country of embarkation ^a										
Australia	106	127	208	229	242	277	378	433	495	561
Bahama Islands	758	799	1,078	1,053	1,344	1,503	1,828	1,596	1,679	1,436
Barbados	76	104	139	123	167	216	237	220	228	197
Belgium	144	113	187	249	250	281	227	305	417	366
Bermuda	398	441	469	451	439	434	516	451	487	430
Brazil	212	186	253	311	308	352	418	501	584	635
China/Taiwan	50	67	96	138	154	206	249	229	325	404
Colombia	173	212	281	334	309	279	264	284	286	305
Denmark	222	238	260	251	230	241	302	356	313	279
Dominican Republic	336	416	465	495	532	606	817	934	948	849
France	512	611	707	686	705	955	1,181	1,570	1,777	1,600
Germany	622	863	1,053	1,182	1,223	1,582	1,962	2,135	2,466	2,444
Grand Cayman	25	68	96	129	144	173	222	226	273	256
Greece	121	198	231	206	234	187	125	128	132	83
Haiti	91	101	142	148	159	192	190	234	233	212
Hong Kong	98	91	187	230	217	270	319	347	356	397
Ireland	220	251	263	229	222	274	291	436	448	418
Israel	84	134	190	190	233	294	230	206	204	202
Italy	431	471	572	493	572	662	665	749	792	716
Jamaica	457	327	492	479	682	707	938	899	975	907
Japan	1,095	1213	1,579	1,705	1,896	2,435	3,098	4,117	4,528	4,510
Korea, South	105	117	169	228	249	390	521	666	826	827
Mexico	1,626	1647	2,611	3,091	2,691	2,719	3,534	3,816	4,313	4,467
Netherlands	312	322	460	450	467	583	621	763	837	892
Netherlands, Antilles	213	269	353	359	370	407	524	593	388	353
Panama Republic	97	122	154	151	146	180	165	111	153	175
Philippines	108	136	163	244	158	145	182	239	246	261
Spain	306	299	333	310	376	419	389	503	558	520
Switzerland	236	345	321	321	314	452	532	648	616	525
United Kingdom	1,549	2102	2,689	3,092	2,812	3,460	3,884	4,638	5,166	4,793
Venezuela	205	282	431	577	312	248	329	415	458	510

Covers passengers on international commercial flights arriving at U.S. airports. Excludes traffic between U.S. and Canada, border crossers, crewmen, and military personnel. Travelers between U.S. ports in the 50 States, Puerto Rico, Guam, or the Virgin Islands, and any other outlying area are included. Data compiled from flight reports of U.S. Immigration and Naturalization Service.

^a Country where passenger boarded/deboarded a direct flight to/from the U.S.

Note: Sum of components may not equal total due to independent rounding.

Source: U.S. DOT/RSPA/Volpe National Transportation Systems Center, *U.S. International Air Travel Statistics*, annual issues, Tables Ia/Ila.

**Table 15. Air Travel Departures Between the United States and
Foreign Countries, 1975-1991**
(thousands)

	1975	1977	1979	1981	1983	1985	1987	1989	1990	1991
Total Passengers	12,053	13,804	18,082	19,911	19,724	22,487	26,664	31,153	34,046	33,286
Flag of Carrier:										
United States	5,912	6,889	9,124	9,581	9,888	10,696	12,853	15,687	17,628	17,530
Foreign	6,141	6,915	8,958	10,330	9,837	11,791	13,811	15,466	16,418	15,756
Country of debarkation ^a										
Australia	103	134	222	258	201	232	349	466	540	581
Bahama Islands	704	719	924	927	1,075	1,151	1,265	1,288	1,279	1,128
Barbados	74	97	124	116	168	204	233	221	230	199
Belgium	134	105	173	238	226	249	180	294	395	318
Bermuda	372	414	443	417	394	389	367	283	277	237
Brazil	206	181	252	301	303	322	396	495	560	592
China/Taiwan	41	61	85	105	128	187	240	245	337	447
Colombia	171	204	272	315	302	294	279	291	277	294
Denmark	188	210	238	243	219	254	295	313	307	239
Dominican Republic	322	390	417	466	490	528	710	838	896	780
France	470	539	646	646	656	894	1,095	1,494	1,626	1,523
Germany	649	824	1,003	1,149	1,220	1,539	1,911	2,064	2,339	2,298
Grand Cayman	26	64	91	117	135	161	199	199	250	238
Greece	123	185	220	190	222	210	129	124	129	88
Haiti	81	94	130	126	144	169	181	224	201	178
Hong Kong	59	51	127	166	184	238	270	315	310	369
Ireland	163	195	236	219	196	233	281	299	311	263
Israel	105	156	195	194	228	255	277	256	259	249
Italy	409	448	517	460	561	660	637	691	731	694
Jamaica	416	297	432	435	601	607	858	798	888	821
Japan	1,183	1,204	1,514	1,697	1,854	2,255	2,937	4,081	4,471	4,431
Korea, South	60	66	134	188	212	333	459	559	723	759
Mexico	1,525	1,570	2,536	3,157	2,670	2,671	3,456	3,656	4,136	4,230
Netherlands	304	314	422	443	458	562	607	714	777	881
Netherlands, Antilles	184	230	302	322	321	395	432	494	377	341
Panama Republic	100	119	148	141	164	209	168	131	183	189
Philippines	81	111	132	178	133	165	162	209	195	194
Spain	260	259	292	288	350	397	382	484	540	513
Switzerland	224	323	305	315	327	434	527	655	600	527
United Kingdom	1,446	1,984	2,608	2,989	2,687	3,322	3,696	4,528	4,903	4,594
Venezuela	198	281	424	571	321	245	320	395	444	488

Covers passengers on international commercial flights departing at U.S. airports. Excludes traffic between U.S. and Canada, border crossers, crewmen, and military personnel. Travelers between U.S. ports in the 50 States, Puerto Rico, Guam, or the Virgin Islands, and any other outlying area are included. Data compiled from flight reports of U.S. Immigration and Naturalization Service.

^a Country where passenger boarded/deboarded a direct flight to/from the U.S.

Note: Sum of components may not equal total due to independent rounding.

Source: U.S. DOT/RSPA/Volpe National Transportation Systems Center, *U.S. International Air Travel Statistics*, annual issues, Tables Id/IId.

Table 16. Top 50 Airports*, Large Scheduled Certificated Air Carriers, 1991

Rank	Airport	Total Enplaned Passengers
1	Chicago, (O'Hare), IL	25,872,241
2	Dallas/Ft. Worth (Regional), TX	22,656,394
3	Los Angeles, CA	18,303,046
4	Atlanta, GA	17,691,130
5	San Francisco, CA	14,026,226
6	Denver, CO	12,313,733
7	Phoenix, AZ	10,972,232
8	Newark, NJ	9,737,488
9	Detroit, MI	9,618,283
10	St. Louis, MO	9,351,652
11	Miami, FL	9,309,591
12	New York (La Guardia), NY	9,194,825
13	Minneapolis/St. Paul, MN	8,862,828
14	Boston, MA	8,862,052
15	Honolulu, Oahu, HI	8,772,316
16	New York (John F. Kennedy), NY	8,245,014
17	Las Vegas, NV	8,222,488
18	Houston, (Intercontinental), TX	7,813,856
19	Pittsburgh, PA	7,707,902
20	Seattle-Tacoma, WA	7,696,481
21	Charlotte, NC	7,668,793
22	Orlando, FL	7,605,356
23	Washington (National), DC	6,631,273
24	Philadelphia, PA	6,381,130
25	Salt Lake City, UT	5,470,129
26	San Diego, CA	5,386,803
27	Washington (Dulles Int'l), DC	4,709,400
28	Tampa, FL	4,338,195
29	Cincinnati, OH	4,314,474
30	Raleigh/Durham, NC	4,309,550
31	Baltimore, MD	4,249,906
32	Nashville, TN	3,901,875
33	Houston (William P. Hobby), TX	3,765,759
34	San Juan, PR	3,739,126
35	Cleveland, OH	3,545,000
36	Memphis, TN	3,494,675
37	Ft. Lauderdale, FL	3,451,761
38	Kansas City, MO	3,288,900
39	Portland, OR	3,164,431
40	New Orleans, LA	3,151,718
41	San Jose, CA	3,150,397
42	Oakland, CA	2,956,220
43	Chicago (Midway), IL	2,936,521
44	Ontario, CA	2,837,028
45	Dallas (Love Field), TX	2,792,557
46	Indianapolis, IN	2,585,727
47	Orange County, CA	2,573,035
48	San Antonio, TX	2,520,324
49	West Palm Beach, FL	2,355,922
50	Albuquerque, NM	2,350,612

* Rank order by total enplaned passengers.

Source: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, 1991, Table 4.11.

TRANSPORTATION TRENDS

Section II: Safety by Transportation Mode

This section presents and compares summary statistics on safety data for individual transportation modes, and for hazardous materials transportation by any mode for 1960-1992. Most of these data were formerly illustrated in the RSPA/Volpe Center's *Transportation Safety Information Report*. This report was based on data input to the Transportation Safety Information System (TRANSIS) by representatives in each of the DOT's modal administrations and the National Transportation Safety Board. Offices cited as sources can provide additional detail and in-depth discussion of the use and interpretation of the data.

The TRANSIS system was established in 1972 in response to a growing requirement for a base of multimodal safety data, both within DOT and from other agencies. A need was perceived for a system that would provide timely reporting of transportation safety statistics and related information on a modal and multimodal basis, and for monitoring current transportation safety problems, activities, and accident trends.

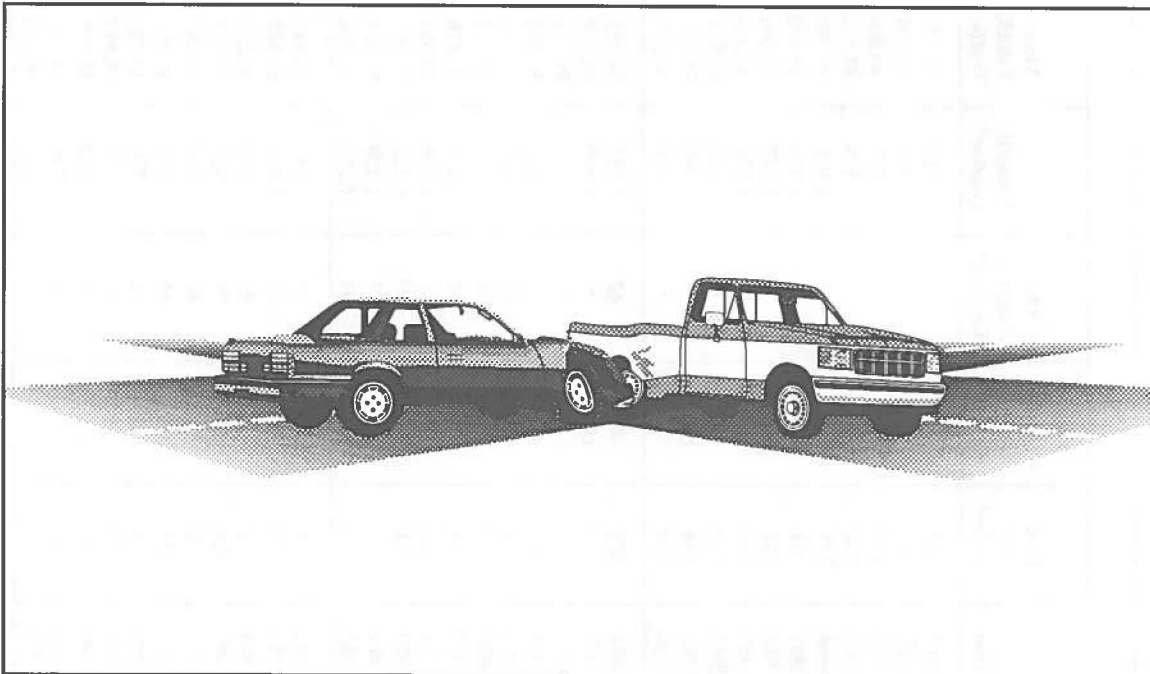


Table 17. Fatalities, Injuries, and Accidents by Transportation Mode, 1960-1992 (page 1 of 3)

Year	Fatalities												
	U.S. Air Carrier ^a	Com- muter Air Carrier ^b	On- Demand Air Taxi ^c	General Aviation ^d	Motor Vehicle Traffic ^e	Railroad	Rail- Highway Grade Crossings ^f	Rail Rapid Transit	Water- borne Transport ^g	Recre- ational Boating	Gas Pipeline	Liquid Pipeline	Hazardous Materials
1960	499	-	-	787	38,137	924	1,421	-	-	819	-	-	-
1961	311	-	-	761	38,091	913	1,352	-	-	1,218	-	-	-
1962	330	-	-	857	40,804	924	1,293	-	-	1,114	-	-	-
1963	264	-	-	893	43,564	896	1,372	-	-	1,167	-	-	-
1964	238	-	-	1,056	47,700	946	1,620	-	-	1,192	-	-	-
1965	261	-	-	1,029	49,163	923	1,610	-	-	1,360	-	-	-
1966	272	62	*	1,149	53,041	965	1,857	-	-	1,318	-	-	-
1967	286	94	*	1,228	52,924	898	1,708	-	-	1,312	-	-	-
1968	349	111	*	1,399	54,862	759	1,546	-	140	1,342	-	11	-
1969	158	142	*	1,495	55,791	752	1,490	-	217	1,350	-	5	-
1970	146	100	*	1,310	54,633	785	1,440	-	178	1,418	22	4	-
1971	203	41	62	1,355	54,381	654	1,356	-	243	1,582	45	2	23
1972	186	121	*	1,305	56,278	685	1,260	-	177	1,437	34	1	12
1973	221	113	*	1,299	55,511	730	1,186	-	128	1,754	35	7	21
1974	460	111	*	1,327	46,402	689	1,224	-	218	1,446	24	10	32
1975	122	28	69	1,252	44,525	575	966	-	243	1,466	14	7	27
1976	38	27	100	1,216	45,523	510	1,174	80	248	1,264	63	5	24
1977	78	33	118	1,276	47,878	534	996	70	157	1,312	36	3	26
1978	160	48	155	1,556	50,331	582	1,064	50	186	1,321	31	3	45
1979	351	66	77	1,221	51,093	546	883	62	174	1,400	45	4	17
1980	1	37	105	1,239	51,091	584	833	83	206	1,360	11	3	19
1981	4	34	94	1,282	49,301	556	728	103	154	1,208	16	5	25
1982	235	14	72	1,187	43,945	512	607	87	223	1,178	31	1	13
1983	15	11	62	1,069	42,589	498	575	50	289	1,241	12	6	8
1984	4	48	52	1,042	44,257	598	649	55	113	1,063	35	0	7
1985	526	37	76	955	43,825	454	582	15	131	1,116	26	5	8
1986	8	4	65	967	46,087	475	616	41	133	1,066	23	3	17
1987	232	59	65	838	46,390	541	624	34	119	1,036	9	3	10
1988	285	21	59	800	47,087	510	689	17	81	946	18	2	19
1989	278	31	83	768	45,582	523	801	45	96	896	36	3	8
1990	39	6	49	763	44,599	599	698	51	85	865	5	3	8
1991	50	77	73	746	41,508	586	608	82	30	924	14	0	10
1992 ^p	33	21	66	812	39,235	592	577	84	-	816	15	5	16

Table 17. Fatalities, Injuries, and Accidents by Transportation Mode, 1960-1992 (page 2 of 3)

Year	Injuries												
	U.S. Air Carrier ^a	Com- muter Air Carrier ^b	On- Demand Air Taxi ^c	General Aviation ^d	Motor Vehicle Traffic	Railroad ^f	Rail- Highway Grade Crossings	Rail Rapid Transit	Water- borne Transport	Recre- ational Boating	Gas Pipeline	Liquid Pipeline	Hazardous Materials
1960	-	-	-	-	-	16,113	3,367	-	-	929	-	-	-
1961	-	-	-	-	-	23,527	3,453	-	-	1,098	-	-	-
1962	-	-	-	-	-	23,629	3,140	-	-	980	-	-	-
1963	-	-	-	-	-	23,839	3,454	-	-	1,164	-	-	-
1964	-	-	-	-	-	23,771	3,706	-	-	1,193	-	-	-
1965	-	-	-	-	-	21,930	3,725	-	-	927	-	-	-
1966	-	-	-	-	-	21,416	3,998	-	-	1,555	-	-	-
1967	-	-	-	-	-	20,628	3,736	-	-	1,365	-	-	-
1968	-	-	-	-	-	20,754	3,690	-	-	1,284	-	-	-
1969	74	-	-	-	2,000,000	19,607	3,611	-	-	1,004	-	-	-
1970	-	-	-	-	2,000,000	17,934	3,272	-	105	780	-	-	-
1971	50	-	-	-	2,000,000	15,593	3,259	-	163	897	-	-	-
1972	178	-	-	-	2,100,000	14,598	3,217	-	110	829	-	-	-
1973	49	-	-	-	2,000,000	14,948	3,259	-	74	1,559	-	-	-
1974	50	-	-	-	1,800,000	17,529	3,179	-	104	993	-	-	-
1975	71	-	-	728	1,800,000	50,138	4,168	-	97	2,136	-	-	648
1976	134	-	-	729	1,800,000	60,444	4,887	8,117	154	1,838	-	-	743
1977	45	-	-	733	1,900,000	62,969	4,898	7,681	127	1,779	-	-	818
1978	90	-	-	754	2,000,000	68,097	4,448	7,191	112	1,761	-	-	1,071
1979	48	45	32	636	2,000,000	69,748	4,398	7,619	115	2,463	11	4	930
1980	17	14	43	675	2,000,000	58,356	3,890	6,801	176	2,650	45	3	626
1981	21	24	37	597	1,900,000	49,710	3,293	6,272	141	2,474	79	32	640
1982	31	28	39	620	1,700,000	37,638	2,637	3,907	271	2,682	266	6	125
1983	8	12	29	566	1,600,000	32,196	2,623	1,977	209	2,913	245	9	189
1984	9	23	35	595	1,700,000	35,660	2,910	2,147	134	2,709	229	19	259
1985	30	16	43	517	1,700,000	31,617	2,687	1,039	172	2,757	106	18	253
1986	20	12	33	547	1,700,000	24,465	2,458	3,642	139	2,847	106	32	316
1987	48	20	19	463	1,700,000	23,604	2,429	3,122	191	3,501	101	20	331
1988	57	4	32	497	1,800,000	24,465	2,589	3,050	130	3,476	87	19	171
1989	22	4	35	450	1,700,000	23,847	2,868	2,846	168	3,635	78	38	330
1990	39	11	36	391	1,700,000	22,736	2,407	296	175	3,822	67	7	423
1991	26	30	27	420	1,600,000	20,707	2,089	-	110	3,967	89	8	438
1992 ^p	13	5	19	418	1,600,000	18,388	1,963	-	-	3,683	87	38	587

Table 17. Fatalities, Injuries, and Accidents by Transportation Mode, 1960-1992 (page 3 of 3)

Year	Accidents/Incidents												
	U.S. Air Carrier ^a	Com-muter Air Carrier ^b	On-Demand Air Taxi ^c	General Aviation ^d	Motor Vehicle Traffic ^h	Railroad	Rail-Highway Grade Crossings ⁱ	Rail Rapid Transit	Water-borne Transport	Recreational Boating	Gas Pipeline ^j	Liquid Pipeline ^j	Hazardous Materials
1960	90	-	-	4,793	10,400,000	-	3,195	-	-	2,738	-	-	-
1961	84	-	-	4,625	10,400,000	-	3,204	-	-	3,282	-	-	-
1962	70	-	-	4,840	11,000,000	-	3,149	-	-	3,139	-	-	-
1963	77	-	-	4,690	11,500,000	-	3,373	-	-	3,527	-	-	-
1964	79	-	-	5,070	12,300,000	-	3,755	-	-	3,922	-	-	-
1965	83	-	-	5,196	13,200,000	-	3,820	-	-	3,752	-	-	-
1966	75	217	*	5,712	13,600,000	-	4,097	-	-	4,350	-	-	-
1967	70	237	*	6,115	13,700,000	-	3,932	-	-	4,113	-	-	-
1968	71	179	*	4,968	14,600,000	8,028	3,816	-	2,570	4,195	-	499	-
1969	63	207	*	4,767	15,500,000	8,543	3,774	-	2,684	4,067	-	403	-
1970	55	190	*	4,712	16,000,000	8,095	3,559	-	2,582	3,803	1,019	351	-
1971	48	148	*	4,648	16,400,000	7,304	3,392	-	2,577	3,909	1,287	310	2,256
1972	50	147	*	4,109	17,000,000	7,532	3,379	-	2,424	3,942	1,293	306	4,347
1973	36	165	*	4,090	16,600,000	9,698	3,379	-	3,108	5,322	1,364	273	6,021
1974	43	191	*	4,234	15,600,000	10,694	3,268	-	3,388	5,104	1,477	256	8,447
1975	37	48	152	3,995	16,500,000	8,041	11,354	-	3,310	6,308	1,373	254	10,951
1976	23	35	137	4,018	16,800,000	10,248	12,114	8,197	3,542	7,199	1,579	212	11,858
1977	24	42	175	4,079	17,600,000	10,362	13,142	7,220	3,885	6,815	1,996	232	15,954
1978	22	55	216	4,216	18,300,000	11,277	13,392	6,555	4,521	6,529	2,088	256	17,964
1979	29	52	160	3,818	18,100,000	9,740	12,509	7,191	4,932	5,368	1,920	248	17,663
1980	19	38	171	3,590	17,900,000	8,451	10,611	6,789	4,624	5,513	1,996	219	15,737
1981	26	31	157	3,500	18,000,000	5,781	9,295	6,271	3,503	5,208	1,623	239	10,010
1982	20	26	132	3,233	18,100,000	4,589	7,763	3,759	3,174	5,377	1,711	200	6,599
1983	24	17	141	3,077	18,100,000	3,906	7,161	-	4,704	5,569	1,580	161	5,815
1984	17	22	146	3,016	18,300,000	3,900	7,281	2,202	3,275	5,700	1,002	203	5,764
1985	22	21	152	2,738	19,300,000	3,275	6,916	1,054	3,439	6,237	331	183	6,019
1986	24	15	116	2,582	17,700,000	2,620	6,396	3,683	3,366	6,407	219	203	5,758
1987	36	32	97	2,494	20,800,000	2,512	6,391	3,156	3,496	6,746	237	229	6,137
1988	29	19	101	2,386	20,600,000	2,854	6,615	3,068	3,593	6,718	258	196	6,169
1989	28	18	111	2,233	12,800,000	2,898	6,525	2,891	3,852	6,063	257	161	7,558
1990	26	15	108	2,218	11,500,000	2,879	5,713	144	3,613	6,411	199	177	8,853
1991	27	22	88	2,143	11,300,000	2,659	5,386	-	2,222	6,573	233	216	9,093
1992 ^p	19	23	74	1,956	10,000,000	2,339	-	-	-	6,048	192	224	9,294

^p preliminary.^{*} Included in Commuter Air Carrier.^a Large carriers operating under 14 CFR 121, all scheduled and nonscheduled service.^b All scheduled service operating under 14 CFR 135 (commuter air carriers).^c Nonscheduled service operating under 14 CFR 135 (on-demand air taxis).^d All operations other than those operated under 14 CFR 121 and 14 CFR 135.^e Figures based on a 30-day definition (see Glossary).^f Fatalities resulting from train accidents, train incidents and non-train incidents.^g Vessel casualties only.^h National Safety Council procedures for estimating the number of accidents were changed in 1989. Thus, data shown are not comparable to earlier years.ⁱ Data not comparable after 1974 due to change in reporting requirements.^j Beginning with 1983 data, Pipeline Incidents are credited to the year in which they occurred, not the year in which the report was received.

Source: See Appendix A, pp. A-18, A-19, A-20, A-21.

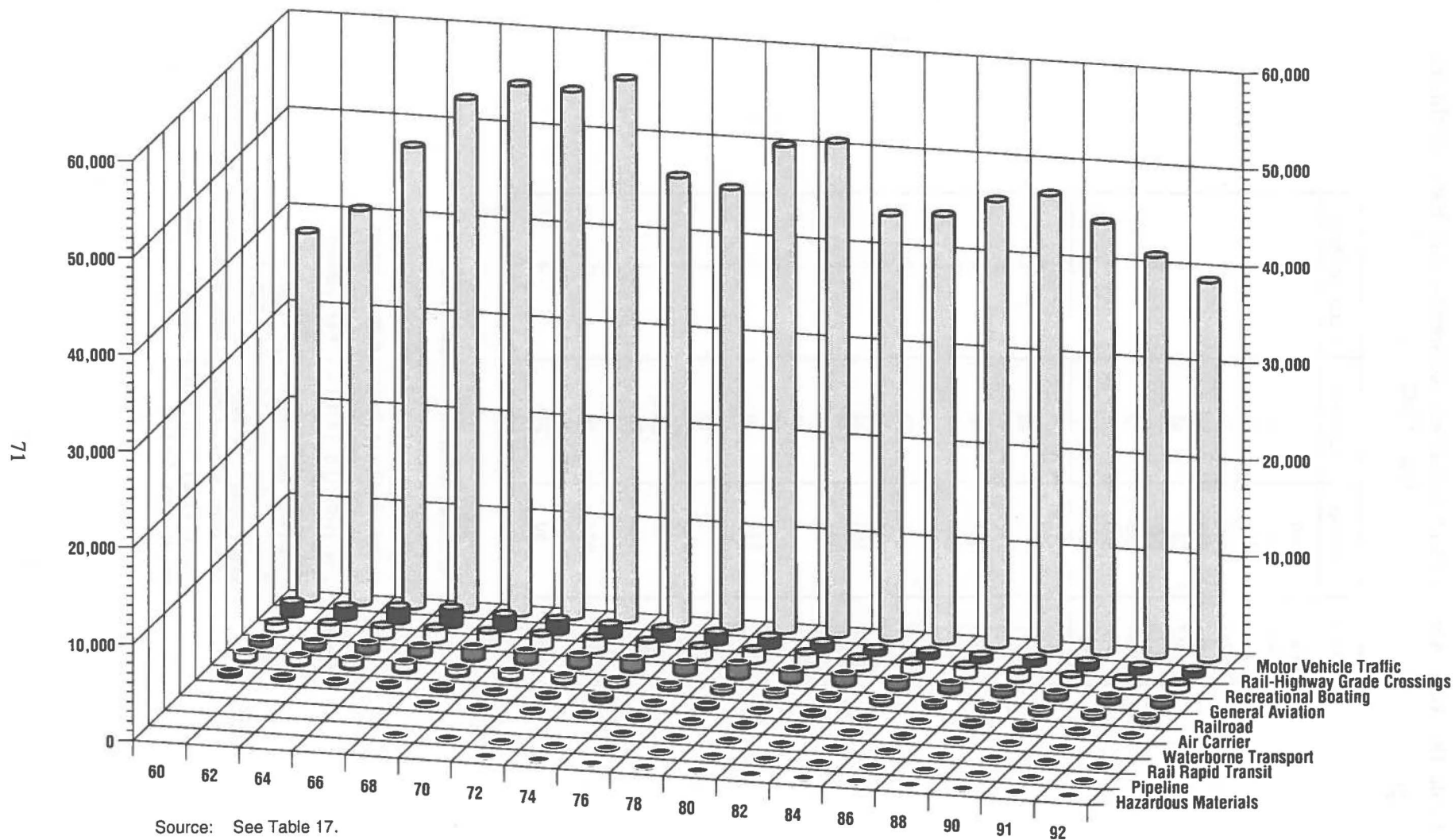


Figure 16. Fatalities by Transportation Mode, 1960-1992

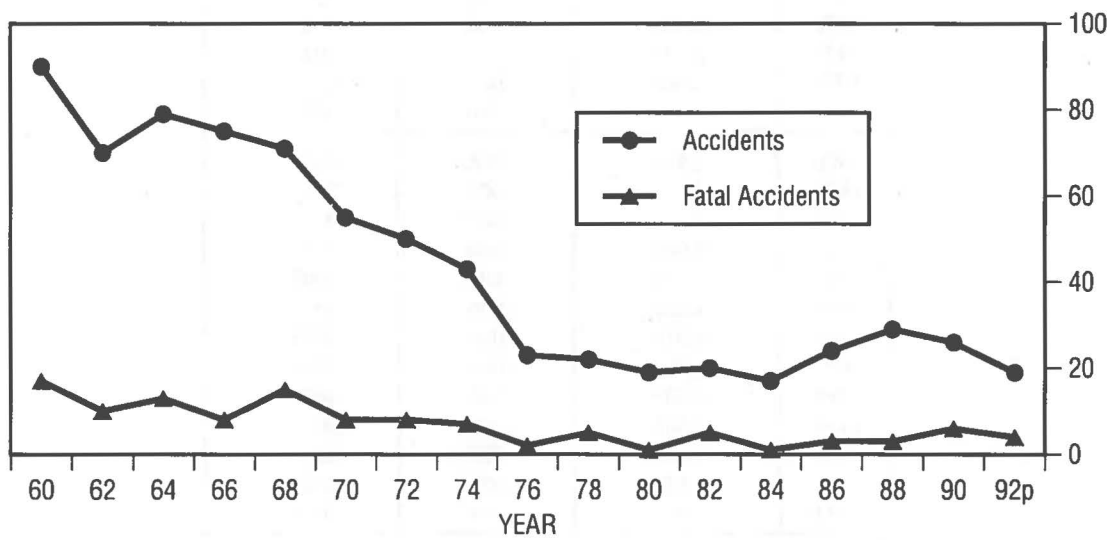
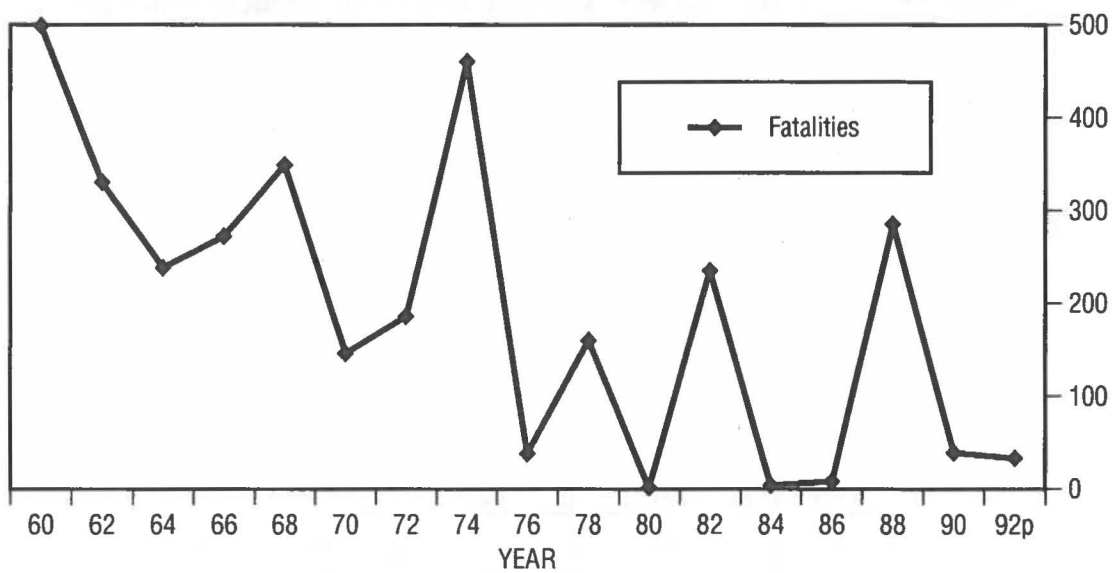
Table 18. U.S. Air Carrier* Fatalities, Accidents, and Fatal Accidents, 1960-1992

Year	Fatalities	Accidents	Fatal Accidents
1960	499	90	17
1961	311	84	11
1962	330	70	10
1963	264	77	13
1964	238	79	13
1965	261	83	9
1966	272	75	8
1967	286	70	12
1968	349	71	15
1969	158	63	10
1970	146	55	8
1971	203	48	8
1972	186	50	8
1973	221	36	8
1974	460	43	7
1975	122	37	3
1976	38	23	2
1977	78	24	5
1978	160	22	5
1979	351	29	5
1980	1	19	1
1981	4	26	4
1982	235	20	5
1983	15	24	4
1984	4	17	1
1985	526	22	7
1986	8	24	3
1987	232	36	5
1988	285	29	3
1989	278	28	11
1990	39	26	6
1991	50	27	4
1992 ^P	33	19	4

^P preliminary.

* Includes all scheduled and nonscheduled service accidents involving deregulated all cargo carriers and commercial operators of large aircraft when those accidents occurred during 14 CFR 121 operations.

Source: 1960-1967: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.
1968-1977: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1988.
1978-1992: National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 2.



p preliminary.
Source: See Table 18.

Figure 17. U.S. Air Carrier Fatalities, Accidents, and Fatal Accidents, 1960-1992

Table 19. U.S. Air Carrier* Accident and Fatal Accident Rates per Aircraft Miles Flown, 1960-1992

Year	Aircraft Miles Flown (millions)	Accident Rate	Fatal Accident Rate
1960	1,130	.078	.011
1961	1,104	.076	.009
1962	1,170	.059	.008
1963	1,231	.063	.011
1964	1,337	.059	.010
1965	1,768	.054	.006
1966	2,160	.042	.006
1967	2,581	.032	.006
1968	2,499	.028	.005
1969	2,737	.023	.003
1970	2,685	.020	.003
1971	2,661	.018	.002
1972	2,619	.019	.003
1973	2,448	.015	.003
1974	2,258	.019	.003
1975	2,325	.016	.001
1976	2,419	.010	.001
1977	2,525	.010	.002
1978	2,608	.008	.002
1979	2,859	.010	.002
1980	2,924	.006	.0003
1981	2,921	.009	.001
1982	2,939	.007	.001
1983	3,069	.008	.001
1984	3,428	.005	.0003
1985	3,631	.006	.002
1986	4,018	.006	.0005
1987	4,361	.008	.0009
1988	4,503	.006	.0004
1989	4,605	.006	.002
1990	4,954	.005	.001
1991	4,825	.006	.0008
1992 ^P	4,987	.004	.0008

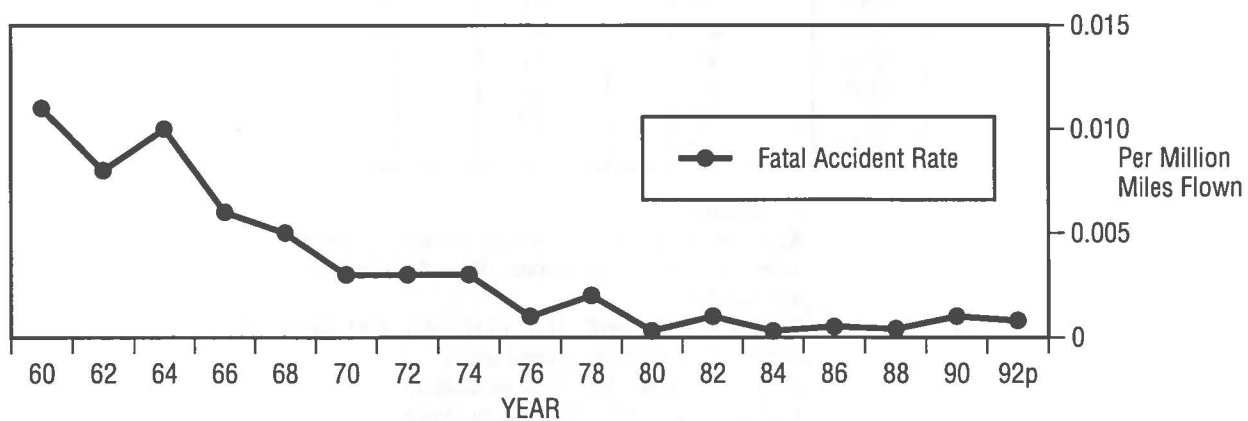
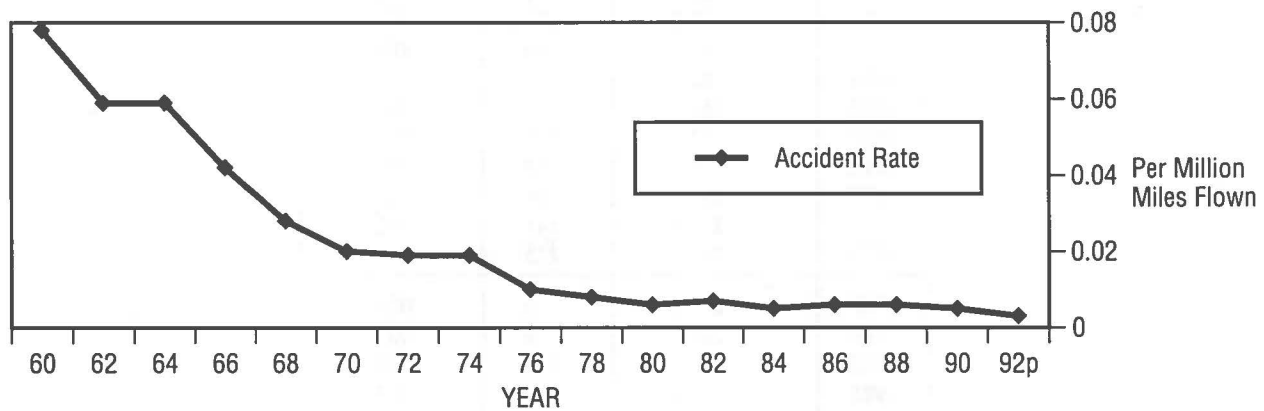
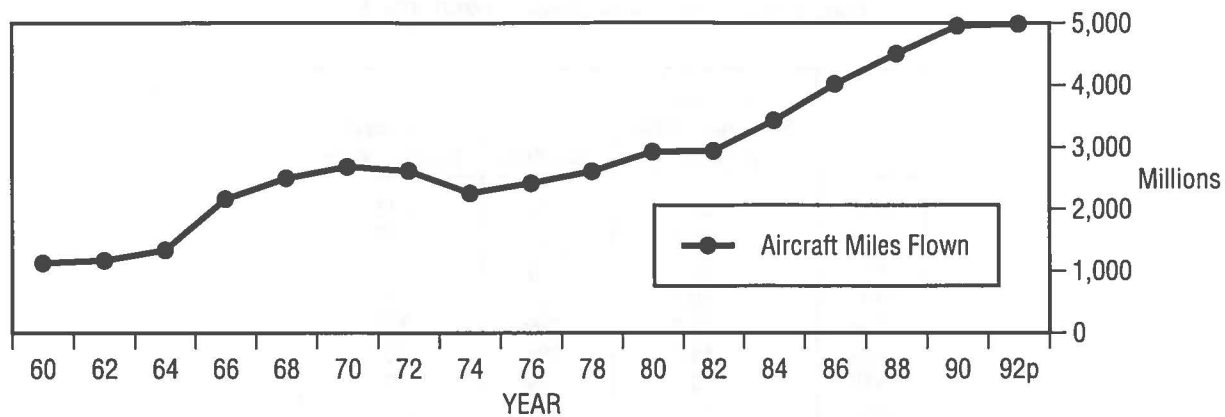
^P preliminary.

* Includes all scheduled and nonscheduled service accidents involving deregulated all cargo air carriers and commercial operators of large aircraft when those accidents occurred during 14 CFR 121 operations.

Source: 1960-1967: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.

1968-1977: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1988.

1978-1992: National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 2.



p preliminary.
Source: See Table 19.

Figure 18. U.S. Air Carrier Accident and Fatal Accident Rates per Aircraft Miles Flown, 1960-1992

**Table 20. U.S. Air Carrier* Passenger Fatality
Rates per Passenger-Mile, 1960-1992**

Year	Revenue Passenger-Miles (billions)	Fatalities	Passenger Fatality Rate
1960	38.9	336	.638
1961	39.8	124	.312
1962	43.8	158	.361
1963	50.4	121	.240
1964	58.5	200	.342
1965	68.7	226	.329
1966	79.9	59	.074
1967	98.7	226	.229
1968	114.0	305	.268
1969	125.4	132	.105
1970	131.7	2	.002
1971	135.7	174	.128
1972	152.4	160	.105
1973	162.0	197	.122
1974	162.9	416	.207
1975	162.8	113	.069
1976	179.0	36	.020
1977	193.2	64	.033
1978	226.8	141	.062
1979	262.0	323	.023
1980	255.2	0	.000
1981	248.8	4	.002
1982	259.6	234	.090
1983	281.8	15	.005
1984	305.1	4	.001
1985	270.6	197	.072
1986	302.1	5	.002
1987	404.5	231	.057
1988	423.3	285	.067
1989	432.7	131	.038
1990	457.9	39	.009
1991	447.9	50	.011
1992 ^P	478.1	33	.007

^P preliminary.

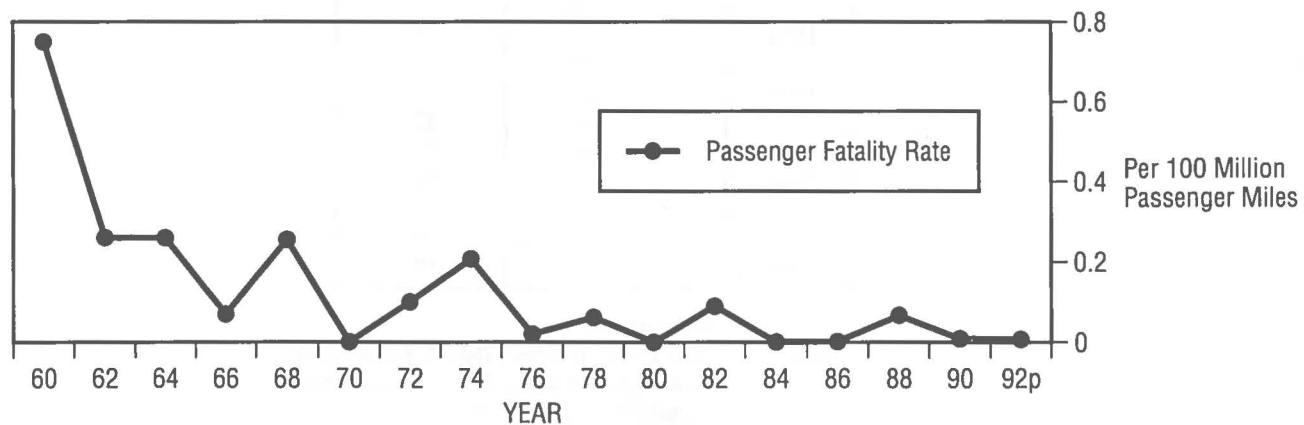
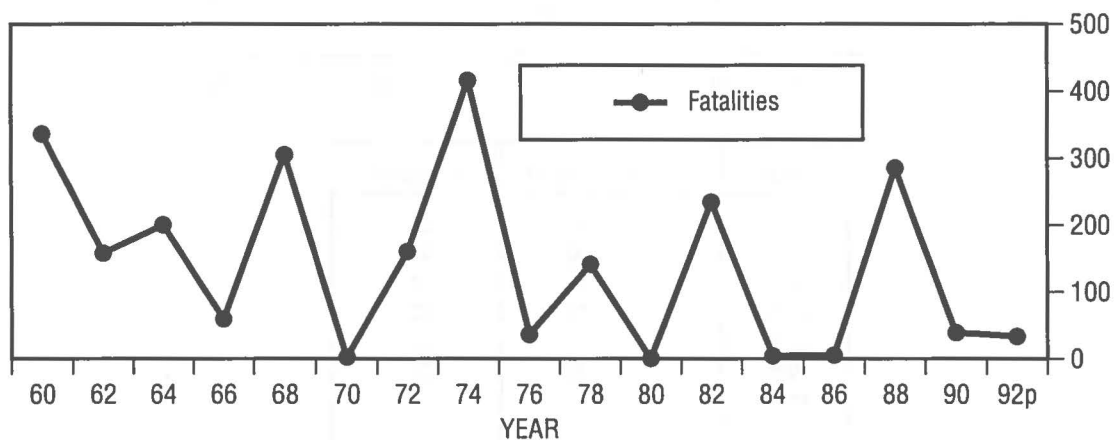
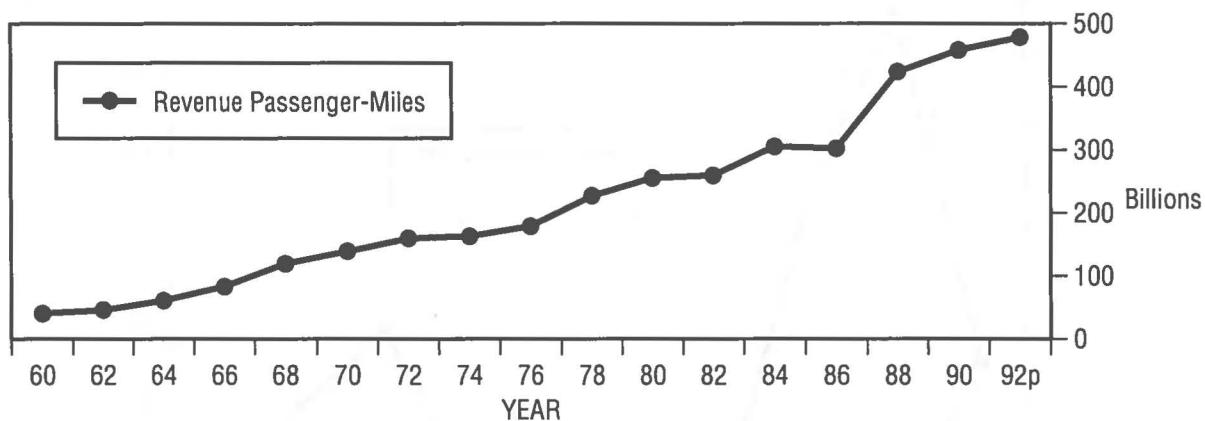
* All scheduled revenue passenger service conducted under 14 CFR 121 operations. Nonscheduled service not included.

Source: Fatalities: 1960-1967: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.

1968-1977: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1988.

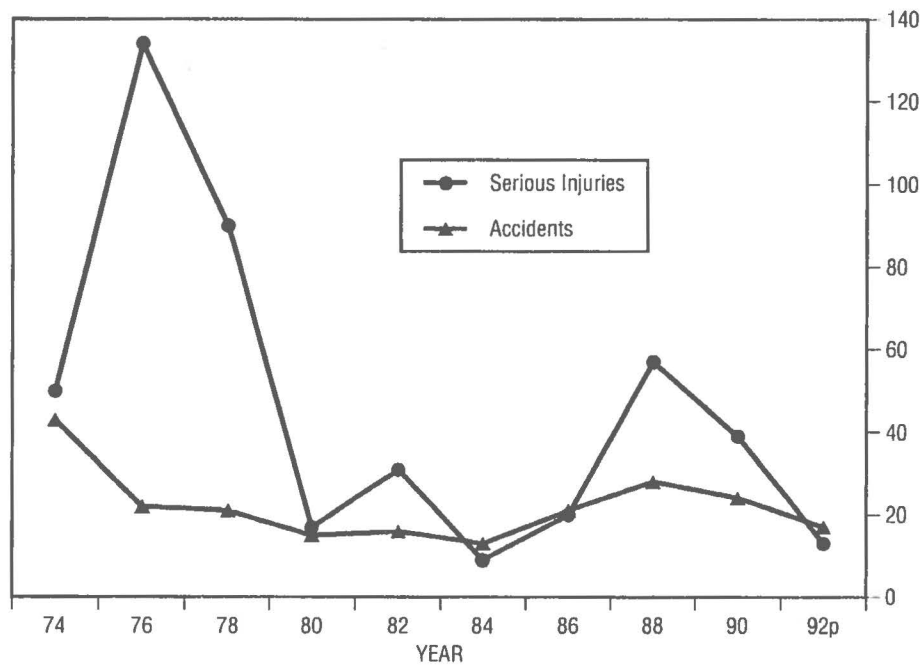
1978-1992: National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 2.

Revenue Passenger-Miles: U.S. DOT/RSPA, *Air Carrier Traffic Statistics*, annual issues.



p preliminary.
Source: See Table 20.

Figure 19. U.S. Air Carrier Passenger Fatality Rates per Passenger-Mile, 1960-1992



Year	Serious Injuries	Accidents
1973	49	36
1974	50	43
1975	71	31
1976	134	22
1977	45	21
1978	90	21
1979	48	24
1980	17	15
1981	21	25
1982	31	16
1983	8	22
1984	9	13
1985	30	17
1986	20	21
1987	48	32
1988	57	28
1989	22	24
1990	39	24
1991	26	26
1992 ^p	13	17

^p preliminary.
Source: 1973-1977: U.S.DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1988.
1978-1992: National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 2.
Serious Injuries: *Ibid.*, Analysis and Data Division, RE-50.

Figure 20. U.S. Air Carrier Accidents and Serious Injuries, 1973-1992

Table 21. Reported Near Midair Collisions, by Degree of Hazard, 1979-1992

CLASSIFICATION	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Critical	127	118	84	56	98	127	180	162	190	110	93	74	52	38
Potential	311	319	232	191	283	317	423	473	605	442	322	266	197	177
No Hazard	99	122	76	64	84	115	133	198	263	158	135	114	99	61
Unclassified	3	9	3	0	10	30	22	7	0	0	0	0	0	0
Open	0	0	0	0	0	0	0	0	0	0	0	0	0	53
Total	540	568	395	311	475	589	758	840	1,058	710	550	454	348	329

Critical: A situation where collision avoidance was due to chance rather than an act on the part of the pilot. Less than 100 feet of aircraft separation would be considered critical.

Potential: An incident which would probably have resulted in a collision if no action had been taken by either pilot. Closest proximity of less than 500 feet would usually be required in this case.

No Hazard: When direction and altitude would have made a midair collision improbable regardless of evasive action taken.

Unclassified: No determination could be made either due to insufficient evidence or unusual circumstances.

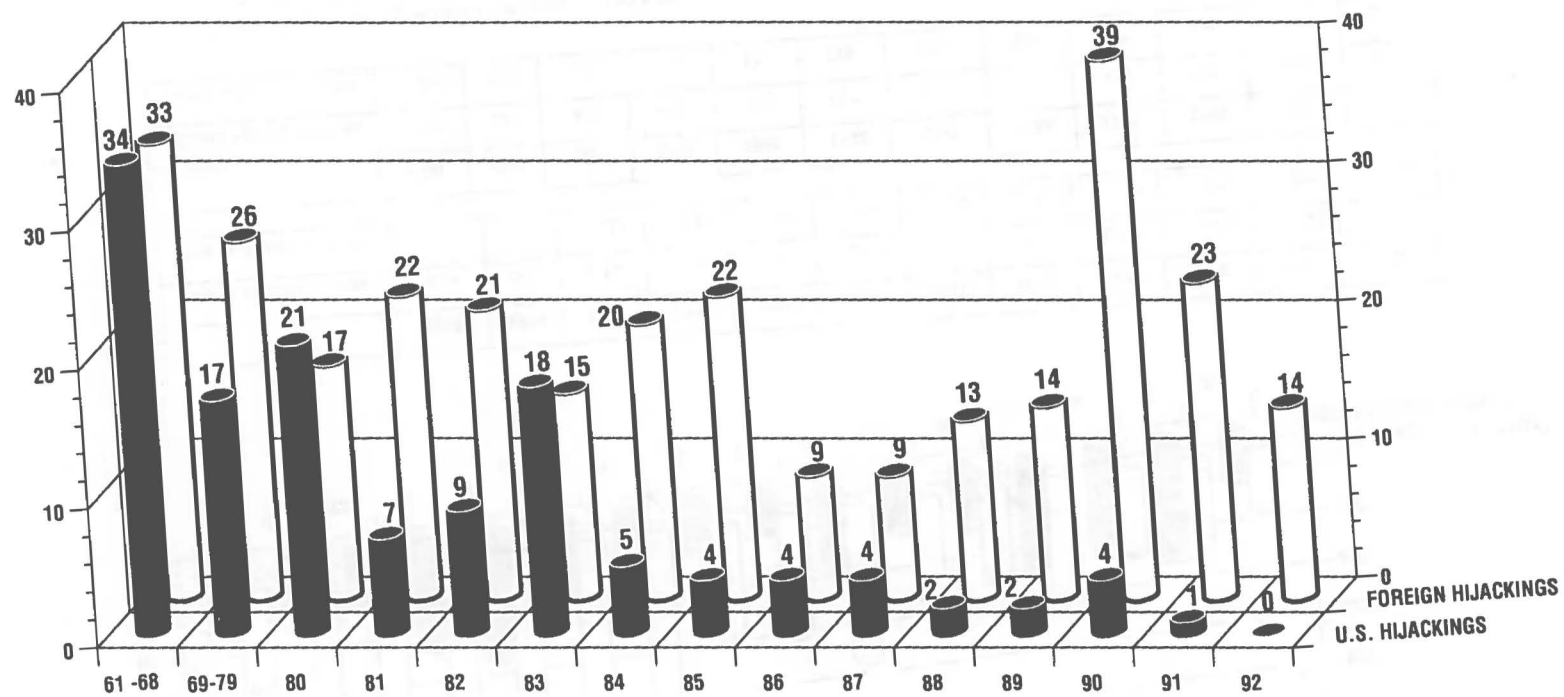
Open: Incidents that are still under investigation.

Source: U.S. DOT/FAA, *Safety Statistical Handbook*, February 1993.

Table 22. Airline Passenger Screening Results, 1972-1991

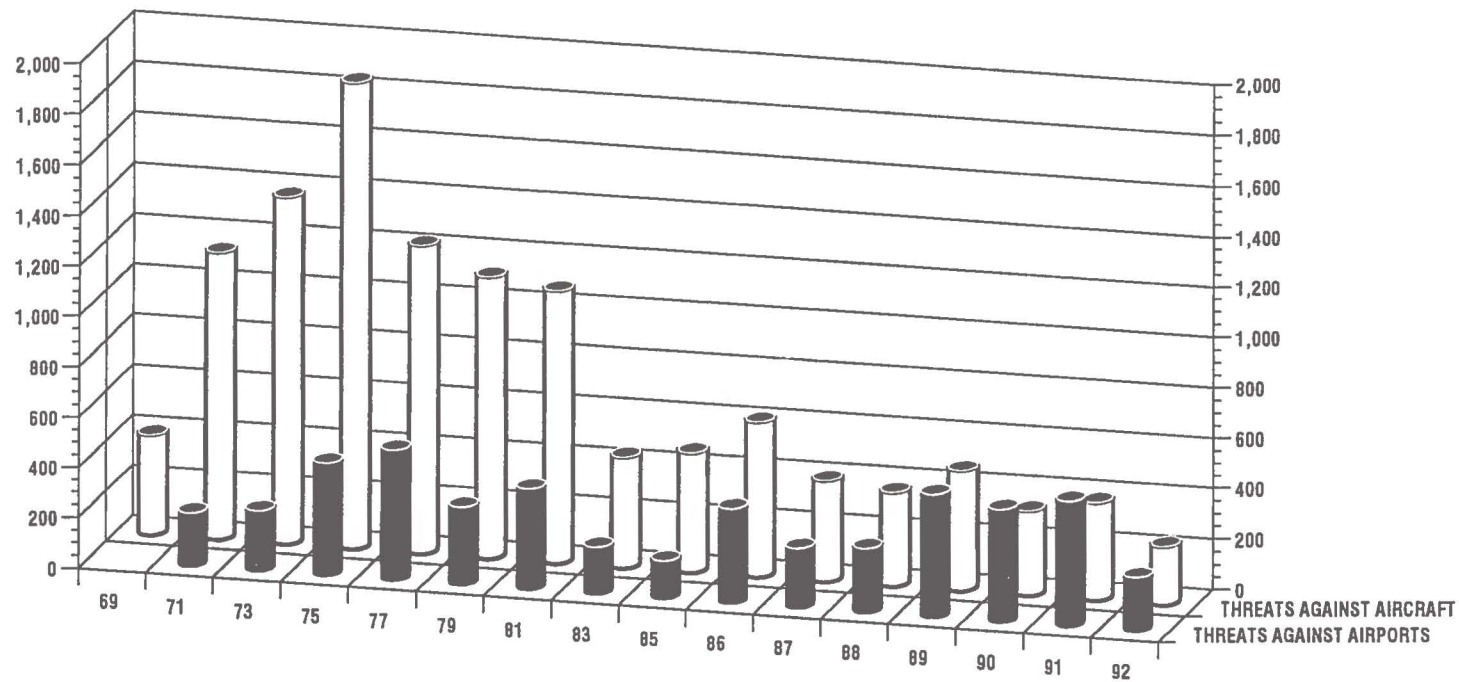
Year	Persons Screened (millions)	Weapons Detected					Persons Arrested	
		Firearms	(1) Handguns	(2) Long Guns	(3) Other	Explosive/ Incendiary Devices	Carrying Firearms/ Explosives	Giving False Information
1972	-	1,313	-	-	-	-	774	244
1973	202	2,162	-	-	-	-	736	658
1974	201	2,450	-	-	-	-	1,147	1,465
1975	97	2,343	-	-	-	-	1,364	227
1976	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	-	-
1978	580	2,058	1,827	67	164	3	896	64
1979	593	2,161	1,962	55	144	3	1,060	47
1980	585	2,022	1,878	36	108	8	1,031	32
1981	599	2,255	2,124	44	87	11	1,187	49
1982	630	2,676	2,559	57	60	1	1,314	27
1983	709	2,784	2,634	67	83	4	1,282	34
1984	776	2,957	2,766	98	91	6	1,285	27
1985	993	2,987	2,823	90	74	12	1,310	42
1986	1,055	3,241	2,981	146	114	11	1,415	89
1987	1,096	3,252	3,012	99	141	14	1,581	81
1988	1,055	2,773	2,591	74	108	11	1,493	222
1989	1,113	2,879	2,397	92	390	26	1,436	83
1990	1,145	2,853	2,490	59	304	15	1,337	18
1991	1,015	1,919	1,597	47	275	94	893	28

Source: U.S. DOT/FAA, *Annual Report to Congress on Civil Aviation Security*, 1991, 1992 draft, and earlier editions.



Source: U.S. DOT/FAA, *Annual Report to Congress on Civil Aviation Security*, 1991, 1992 draft, and earlier editions.

Figure 21. U.S. and Foreign Air Carrier Aircraft Hijackings, 1961-1992



	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Threats Against Airports	400	601	1,145	2,156	1,383	1,453	1,853	1,950	1,229	1,032	1,121	1,179
Threats Against Aircraft	-	-	212	288	239	397	449	1,036	519	318	309	268

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Threats Against Airports	1,084	887	442	437	477	617	401	372	479	338	388	233
Threats Against Aircraft	400	203	188	139	153	376	238	256	487	448	498	218

* An analysis of the period from June 1, 1985 through April 30, 1986 reveals that the increase in threats may be attributed, in part, to extensive publicity given aviation explosive incidents.

Source: U.S. DOT/FAA, *Annual Report to Congress on Civil Aviation Security*, 1991, 1992 draft, and earlier editions.

Figure 22. Bomb Threats Against U.S. Aircraft and U.S. Airports, 1969-1992

Table 23. Commuter Air Carrier* Accidents, Fatalities, Injuries, and Accident Rates, 1975-1992

Year	Fatal Accidents	Total Accidents	Fatalities	Serious Injuries	Fatal Accident Rate**+	Total Accident Rate**+	Fatal Accident Rate#+	Total Accident Rate#+
1975	12	48	28	-	0.07	0.30	0.82	3.30
1976	9	35	27	-	0.05	0.20	0.59	2.28
1977	9	42	33	-	0.04	0.22	0.52	2.53
1978	14	55	48	-	0.06	0.27	0.70	3.06
1979	15	52	66	45	0.08	0.27	0.80	2.76
1980	8	38	37	14	0.04	0.20	0.45	2.14
1981	9	31	34	24	0.05	0.16	0.49	1.69
1982	5	26	14	28	0.02	0.12	0.25	1.28
1983	2	17	11	12	0.01	0.07	0.09	0.73
1984	7	22	48	23	0.02	0.08	0.26	0.82
1985	7	21	37	16	0.02	0.07	0.27	0.82
1986	2	15	4	12	0.01	0.05	0.07	0.54
1987	10	32	59	20	0.03	0.09	0.36	1.14
1988	2	19	21	4	0.01	0.05	0.07	0.65
1989	5	18	31	4	0.01	0.05	0.18	0.64
1990	3	15	6	11	0.01	0.03	0.10	0.48
1991	8	22	77	30	0.02	0.06	0.30	0.81
1992 ^P	7	23	21	5	0.02	0.06	0.24	0.80

^P preliminary.

* All scheduled service conducted under 14 CFR 135.

** Per million aircraft miles flown.

+, Rates are based on all accidents including some involving operators not reporting traffic data to the U.S. Department of Transportation.

Per 100,000 departures.

Source: 1975-1977: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

1978-1992: NTSB, *NTSB Aviation Accident Statistics*, annual issues.

Serious Injuries: NTSB, Analysis and Data Division, RE-50.

Table 24. On-Demand Air Taxi* Accidents, Fatalities, Injuries, and Accident Rates, 1975-1992

Year	Fatal Accidents	Total Accidents	Fatalities	Serious Injuries	Fatal Accident Rate**	Total Accident Rate**
1975	24	152	69	-	0.95	6.02
1976	31	137	100	-	1.15	5.07
1977	31	175	118	-	0.94	4.78
1978	54	216	155	-	1.52	5.58
1979	30	160	77	32	0.81	4.34
1980	46	171	105	43	1.27	4.73
1981	40	157	94	37	1.38	5.42
1982	31	132	72	39	1.03	4.39
1983	27	141	62	29	1.14	5.93
1984	23	146	52	35	0.81	5.14
1985	35	152	76	43	1.36	5.99
1986	31	116	65	33	1.15	4.35
1987	30	97	65	19	1.13	3.65
1988	28	101	59	32	1.06	3.84
1989	25	111	83	35	0.83	3.68
1990	28	108	49	36	1.25	4.82
1991	26	88	73	27	1.16	3.93
1992 ^P	24	74	66	19	1.08	3.32

^P preliminary.

* Nonscheduled service conducted under CFR 135. Accidents on foreign soil and in foreign waters excluded.

** Per 100,000 aircraft hours.

Source: 1975-1977: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

1978-1992: NTSB, *NTSB Aviation Accident Statistics*, annual issues.

Serious Injuries: NTSB, Analysis and Data Division, RE-50.

Table 25. General Aviation* Accidents, Fatalities, Serious Injuries, and Fatal Accidents, 1960-1992

Year	Accidents	Fatalities	Serious Injuries	Fatal Accidents
1960	4,793	787	-	429
1961	4,625	761	-	426
1962	4,840	857	-	430
1963	4,690	893	-	482
1964	5,070	1,056	-	504
1965	5,196	1,029	-	538
1966	5,712	1,149	-	573
1967	6,115	1,228	-	603
1968	4,968	1,399	-	692
1969	4,767	1,495	-	647
1970	4,712	1,310	-	641
1971	4,648	1,355	-	661
1972	4,109	1,305	-	653
1973	4,090	1,299	-	679
1974	4,234	1,327	-	689
1975	3,995	1,252	728	633
1976	4,018	1,216	729	658
1977	4,079	1,276	733	661
1978	4,216	1,556	754	719
1979	3,818	1,221	636	631
1980	3,590	1,239	675	618
1981	3,500	1,282	597	654
1982	3,233	1,187	620	591
1983	3,077	1,069	566	556
1984	3,016	1,042	595	545
1985	2,738	955	517	498
1986	2,582	967	547	474
1987	2,494	838	463	447
1988	2,386	800	497	460
1989	2,233	768	450	432
1990	2,218	763	391	445
1991	2,143	746	420	414
1992 ^P	1,956	812	418	408

^P preliminary.

* All operations other than those conducted under 14 CFR 121 or 14 CFR 135.

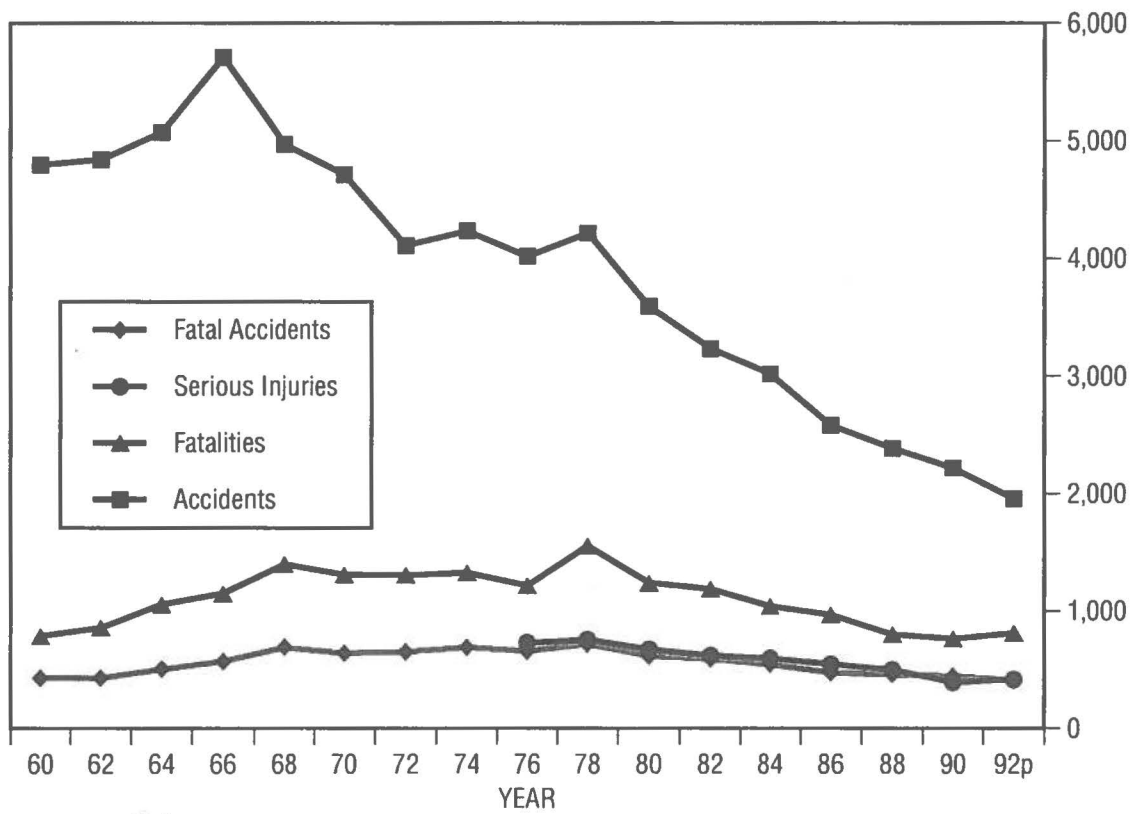
Accidents on foreign soil and in foreign waters are excluded.

Source: 1960-1967: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.

1968-1977: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1988.

1978-1992: National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 2.

Serious Injuries: NTSB, Analysis and Data Division, RE-50.



p preliminary.
Source: See Table 25.

Figure 23. General Aviation Accidents, Fatalities, Serious Injuries, and Fatal Accidents, 1960-1992

**Table 26. General Aviation* Fatality and Accident Rates per
Aircraft Hours Flown, 1960-1992**

Year	Aircraft Hours Flown ^e (millions)	Fatality Rate	Accident Rate	Fatal Accident Rate
1960	12.1	6.49	36.5	3.30
1961	13.6	5.59	34.0	3.10
1962	14.5	5.91	33.4	3.00
1963	15.1	5.91	31.0	3.20
1964	15.7	6.71	32.2	3.20
1965	15.7	6.54	31.4	3.20
1966	21.0	5.47	25.8	2.60
1967	24.1	5.54	27.6	2.70
1968	24.1	5.80	20.6	2.86
1969	25.4	5.89	18.8	2.55
1970	26.0	5.04	18.1	2.46
1971	25.5	5.31	18.2	2.59
1972	24.4	5.34	16.8	2.67
1973	26.9	4.82	15.2	2.52
1974	27.8	4.77	15.2	2.47
1975	28.8	4.35	13.9	2.20
1976	30.5	3.99	13.2	2.16
1977	31.6	4.04	12.9	2.09
1978	34.9	4.46	12.1	2.06
1979	38.6	3.16	9.9	1.63
1980	36.4	3.40	9.9	1.70
1981	36.8	3.48	9.5	1.78
1982	29.6	4.01	10.9	1.99
1983	28.7	3.72	10.7	1.94
1984	29.1	3.58	10.4	1.87
1985	28.3	3.37	9.7	1.75
1986	27.1	3.56	9.5	1.75
1987	26.9	3.11	9.2	1.65
1988	27.4	2.91	8.7	1.68
1989	27.9	2.75	8.0	1.53
1990	28.5	2.67	7.8	1.56
1991	27.2	2.74	7.9	1.52
1992 ^P	27.2	2.98	7.2	1.50

^P preliminary.

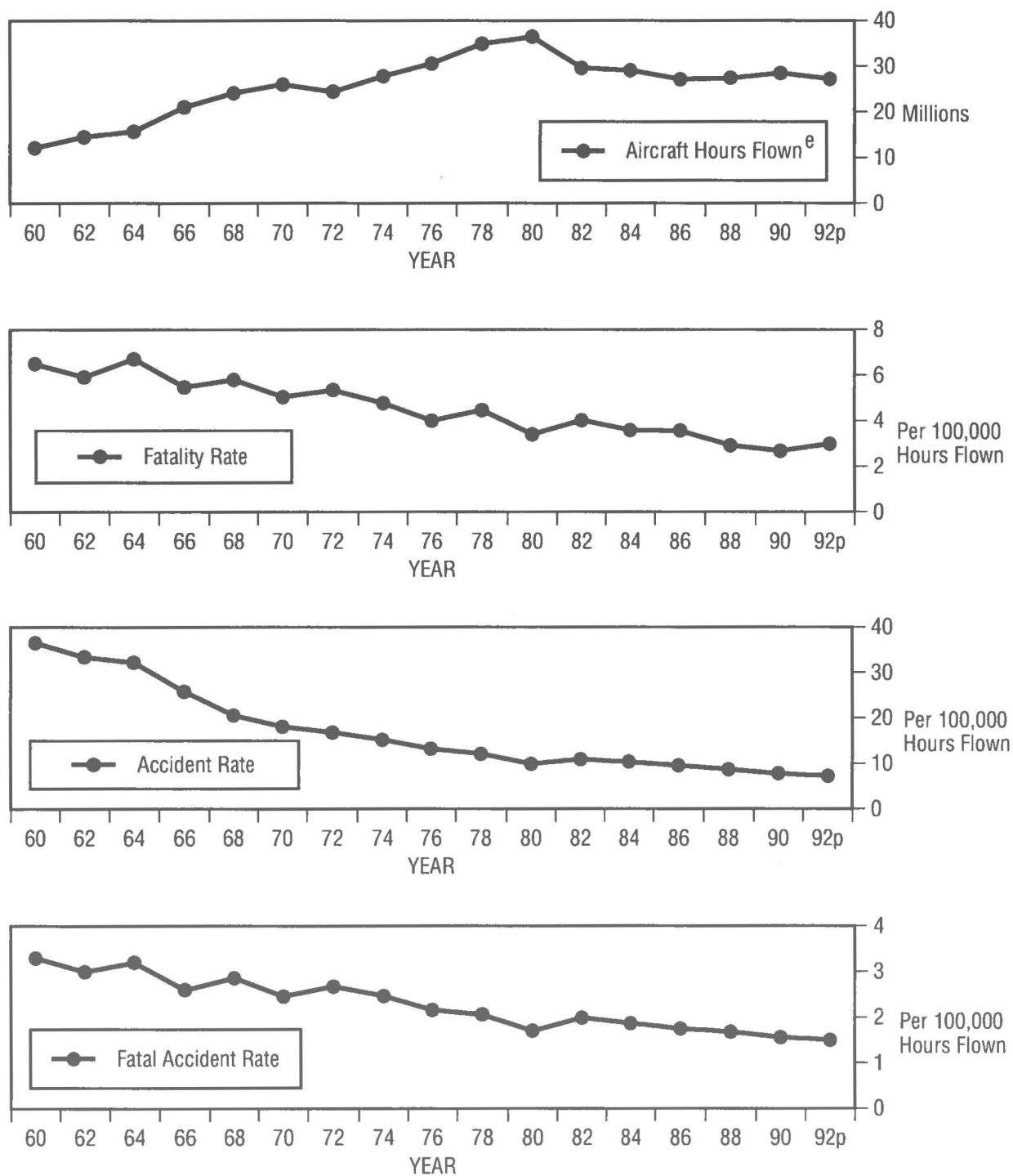
* All operations other than those conducted under 14 CFR 121 or 14 CFR 135. Accidents on foreign soil and in foreign waters are excluded.

^e Source of estimate: FAA. Hours flown for the years 1982 through 1991 have been revised to reflect the results of FAA's General Aviation Activity and Avionics Non-respondent Survey.

Note: Suicide/sabotage accidents excluded from rates as follows: (1973-2, 1974-2, 1975-2, 1976-4, 1977-1, 1978-2, 1980-1, 1982-3, 1983-1, 1984-3, 1985-3, 1987-1, 1988-1, and 1989-5). Suicide/sabotage fatal accidents excluded from rates as follows: (1984-2, 1985-2, 1987-1, and 1989-4).

Source: 1960-1967: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues. 1968-1977: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1988.

1978-1992: National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 2.



e estimate.
p preliminary.
Source: See Table 26.

Figure 24. General Aviation Fatality and Accident Rates per Aircraft Hours Flown, 1960-1992

Table 27. Motor Vehicle Traffic Data Comparisons, 1960-1992

Year	Total Registered Motor Vehicles (000)	Auto-mobiles (000)	Trucks (000)	Buses (000)	Motor-cycles (000)	Licensed Drivers (000)	Percent Under 25 yrs Old	Percent Over 64 yrs Old	Vehicle Mileage (Billions)	Traffic Fatalities	Traffic Fatality Rate*
1960	74,444	61,684	11,914	272	574	87,253	-	-	719	38,137	5.30
1961	76,411	63,274	12,261	280	596	88,744	-	-	738	38,091	5.16
1962	79,703	65,978	12,780	285	660	90,588	-	-	767	40,804	5.32
1963	83,500	69,056	13,360	298	786	93,573	18.9	8.2	805	43,564	5.41
1964	87,287	71,984	14,013	305	985	95,468	19.7	7.7	847	47,700	5.63
1965	91,743	75,261	14,786	314	1,312	98,502	20.5	7.6	888	49,163	5.54
1966	95,703	78,125	15,503	322	1,753	100,998	20.8	7.9	926	53,041	5.73
1967	98,859	80,399	16,169	338	1,953	103,172	20.9	7.8	964	52,924	5.49
1968	102,988	83,605	16,942	352	2,089	105,410	21.0	7.8	1,016	54,862	5.17
1969	107,412	86,858	17,874	364	2,316	108,306	21.5	8.0	1,062	55,791	5.25
1970	111,243	89,244	18,797	378	2,824	111,543	22.0	8.0	1,110	54,633	4.92
1971	116,330	92,718	19,871	397	3,344	114,426	22.0	9.2	1,179	54,381	4.61
1972	122,557	97,082	21,308	407	3,760	118,414	22.2	8.9	1,260	56,278	4.47
1973	130,025	101,985	23,244	425	4,371	121,546	22.3	9.0	1,313	55,511	4.23
1974	134,899	104,856	24,630	447	4,966	125,427	22.4	9.3	1,281	46,402	3.62
1975	137,915	106,705	25,781	462	4,967	129,791	22.6	9.5	1,327	44,525	3.36
1976	143,476	110,189	27,876	478	4,933	134,036	22.4	9.8	1,402	45,523	3.25
1977	147,026	112,288	29,314	491	4,933	138,121	22.1	9.9	1,467	47,878	3.26
1978	153,281	116,573	31,336	505	4,867	140,844	21.9	10.2	1,545	50,331	3.26
1979	157,292	118,429	32,914	527	5,422	143,284	21.6	10.4	1,529	51,093	3.34
1980	161,761	121,601	33,667	529	5,694	145,295	21.0	10.6	1,527	51,091	3.35
1981	164,117	123,098	34,644	544	5,831	147,075	20.6	10.8	1,553	49,301	3.17
1982	165,397	123,702	35,382	559	5,754	150,234	20.2	11.2	1,595	43,945	2.76
1983	169,335	126,444	36,723	583	5,585	154,389	20.2	11.2	1,653	42,589	2.58
1984	171,729	128,158	37,507	584	5,480	155,424	19.0	11.7	1,720	44,257	2.57
1985	177,097	131,864	39,196	594	5,444	156,868	18.3	11.9	1,774	43,825	2.47
1986	181,356	135,431	40,069	594	5,262	159,487	17.4	12.3	1,838	46,087	2.51
1987	183,871	137,208	41,144	602	4,917	161,818	17.1	12.4	1,924	46,390	2.41
1988	188,981	141,252	42,529	616	4,584	162,853	16.5	12.7	2,026	47,087	2.32
1989	191,694	143,026	43,609	625	4,434	165,555	16.5	12.7	2,082	45,582	2.19
1990	193,057	143,453	44,718	627	4,259	167,015	15.7	13.3	2,148	44,599	2.08
1991	192,549	142,956	44,785	631	4,177	168,995	15.1	13.4	2,172	41,508	1.91
1992 ^c	189,694	143,823	-	-	4,081	171,508	15.1	13.6	2,237	39,235	1.75

^c estimate.

* Per 100 million vehicle-miles.

Source: Registered Vehicles, Licensed Drivers and Vehicle Mileage:

1960-1984: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Tables MV-200, DL-201, VM-201A.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Tables MV-1, DL-20, VM-1.

1992: *Ibid.*, Office of Highway Information Management, HPM-40.

Fatalities:

1960-1974: National Safety Council, *Accident Facts*, 1992.

1975-1992: U.S. DOT/NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System.

Table 28. Traffic Fatalities by Major Category, 1960-1992 (page 1 of 2)

Year	Occupant Fatalities by Vehicle Type									
	Passenger Cars						Trucks			
	Total ^a	Sub-Compact	Compact	Intermediate	Full	Unknown	Total	Light Trucks	Heavy Trucks	Other Trucks
1960	24,800	-	-	-	-	-	-	-	-	-
1961	24,700	-	-	-	-	-	-	-	-	-
1962	26,800	-	-	-	-	-	-	-	-	-
1963	28,900	-	-	-	-	-	-	-	-	-
1964	31,500	-	-	-	-	-	-	-	-	-
1965	32,500	-	-	-	-	-	-	-	-	-
1966	34,800	-	-	-	-	-	-	-	-	-
1967	34,800	-	-	-	-	-	-	-	-	-
1968	36,200	-	-	-	-	-	-	-	-	-
1969	36,800	-	-	-	-	-	5,550	-	-	-
1970	34,800	-	-	-	-	-	5,400	-	-	-
1971	34,230	-	-	-	-	-	5,300	-	-	-
1972	35,220	-	-	-	-	-	5,500	-	-	-
1973	33,670	-	-	-	-	-	5,700	-	-	-
1974	26,750	-	-	-	-	-	4,900	-	-	-
1975	25,928	3,834	614	1,869	10,800	8,812	5,817	4,856	671	290
1976	26,166	4,316	694	2,036	11,185	7,935	6,570	5,438	1,003	129
1977	26,782	5,013	696	2,049	11,642	7,382	7,263	5,976	990	297
1978	28,153	5,654	792	2,594	12,427	6,686	8,140	6,745	1,044	351
1979	27,808	6,595	833	3,206	12,111	5,059	8,610	7,178	1,088	344
1980	27,449	7,299	927	3,878	11,580	3,768	8,748	7,486	956	306
1981	26,645	7,907	1,052	4,107	10,200	3,379	8,214	7,081	842	291
1982	23,330	7,165	1,210	3,919	8,430	2,606	7,303	6,359	790	154
1983	22,979	7,373	1,499	3,985	7,959	2,163	7,184	6,202	777	205
1984	23,620	7,901	2,801	4,287	7,429	1,922	7,570	6,496	870	204
1985	23,212	7,993	2,635	4,391	6,576	1,607	7,666	6,689	820	157
1986	24,944	8,570	3,350	4,803	6,903	1,318	8,243	7,317	781	145
1987	25,132	8,822	3,943	4,917	6,097	1,353	8,910	8,058	727	125
1988	25,808	8,788	4,764	5,016	5,744	1,496	9,217	8,306	786	125
1989	25,063	8,740	5,099	5,044	5,251	929	9,409	8,551	731	127
1990	24,092	8,309	5,310	4,849	4,635	989	9,306	8,601	571	134
1991	22,385	7,694	5,338	4,681	4,040	632	9,052	8,391	546	115
1992 ^p	21,366	7,028	5,349	4,416	3,793	780	8,666	8,082	486	98

Table 28. Traffic Fatalities by Major Category, 1960-1992 (page 2 of 2)

Year	Occupant Fatalities by Vehicle Type			Non-Occupant Fatalities			
	Motorcycles ^b	Other and Unknown Vehicle Type	Total	Pedestrian	Pedalcyclist ^c	Other	Total
1960	731	-	29,750	7,850	460	77	8,387
1961	697	-	29,850	7,650	490	101	8,140
1962	759	-	32,300	7,900	500	104	8,400
1963	882	-	34,700	8,200	580	84	8,780
1964	1,118	-	37,900	9,000	710	90	9,710
1965	1,515	-	39,450	8,900	680	133	9,580
1966	2,043	-	42,800	9,400	740	101	10,140
1967	1,971	-	42,700	9,400	750	74	10,150
1968	1,900	-	44,100	9,900	790	72	10,690
1969	1,960	570	45,320	10,100	800	91	10,991
1970	2,330	970	43,500	9,900	780	-	10,680
1971	2,410	840	43,200	9,900	800	-	10,700
1972	2,700	950	44,700	10,300	1,000	-	11,300
1973	3,130	1,200	44,050	10,200	1,000	-	11,200
1974	3,160	1,270	36,400	8,500	1,000	-	9,500
1975	3,189	991	35,925	7,516	1,003	81	8,600
1976	3,312	1,054	37,102	7,427	914	80	8,421
1977	4,104	1,001	39,150	7,732	922	74	8,728
1978	4,577	663	41,533	7,795	892	111	8,798
1979	4,894	618	41,930	8,096	932	135	9,163
1980	5,144	586	41,927	8,070	965	129	9,164
1981	4,906	659	40,424	7,837	936	104	8,877
1982	4,453	560	35,646	7,331	883	85	8,299
1983	4,265	415	34,843	6,826	839	81	7,746
1984	4,608	486	36,284	7,025	849	99	7,973
1985	4,564	601	36,043	6,808	890	84	7,782
1986	4,566	481	38,234	6,779	941	133	7,853
1987	4,036	487	38,565	6,745	948	132	7,825
1988	3,662	483	39,170	6,870	911	136	7,917
1989	3,141	474	38,087	6,556	832	107	7,495
1990	3,244	492	37,134	6,482	859	124	7,465
1991	2,806	497	34,740	5,801	843	124	6,768
1992 ^p	2,394	443	32,869	5,546	722	98	6,366

^p preliminary.

^a 1960-1974: Includes taxis.

^b 1960-1974: Includes motor scooters and motor bikes.

^c 1960-1974: Includes deaths of pedalcyclists and motor vehicle occupants involved in collision.

Note: Occupant and Non-Occupant fatalities for 1970-1974 may not add to total due to rounding of numbers.

Source: 1960-1974: National Safety Council, *Accident Facts*, annual issues.

1975-1992: U.S. DOT/NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

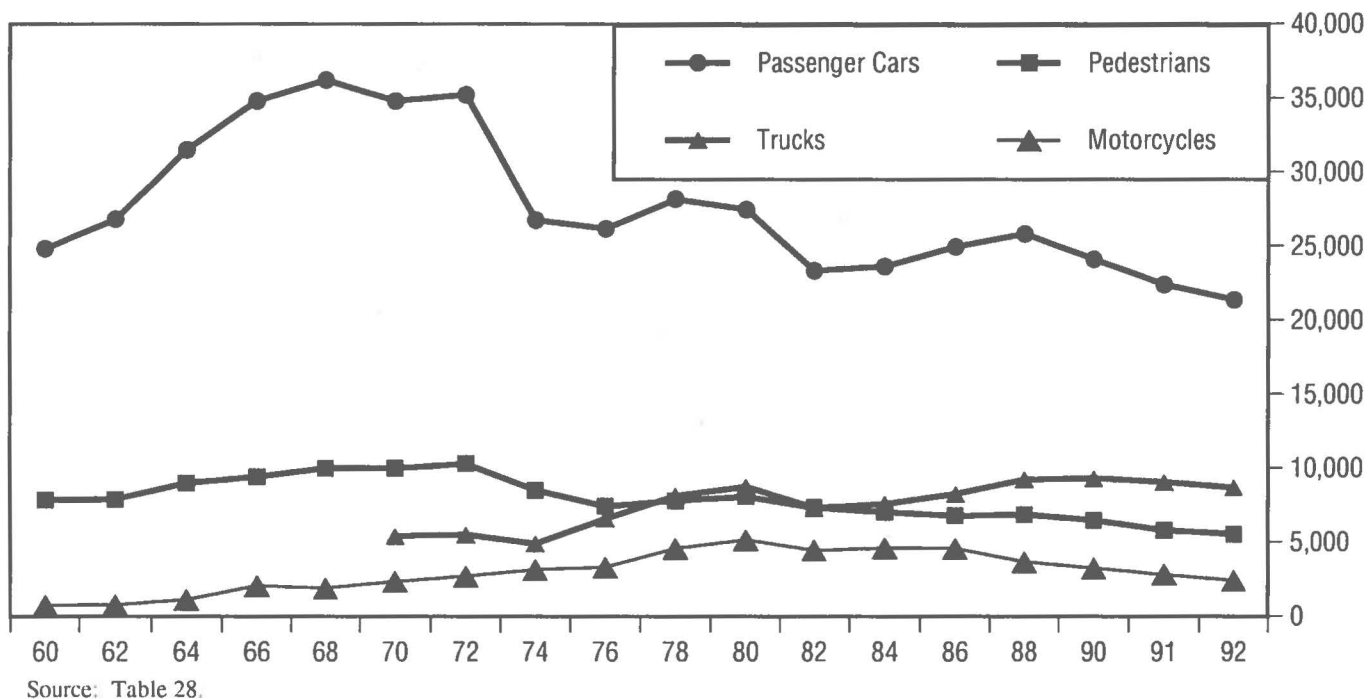


Figure 25. Traffic Fatalities by Major Category, 1960-1992

**Table 29. Motor Vehicle Traffic Accidents and Traffic Fatalities,
1960-1992**

Year	Millions	Thousands
	Traffic Accidents*	Traffic Fatalities
1960	10.4	38.1
1961	10.4	38.1
1962	11.0	40.8
1963	11.5	43.6
1964	12.3	47.7
1965	13.2	49.2
1966	13.6	53.0
1967	13.7	52.9
1968	14.6	54.9
1969	15.5	55.8
1970	16.0	54.6
1971	16.4	54.4
1972	17.0	56.3
1973	16.6	55.5
1974	15.6	46.4
1975	16.5	44.5
1976	16.8	45.5
1977	17.6	47.9
1978	18.3	50.3
1979	18.1	51.1
1980	17.9	51.1
1981	18.0	49.3
1982	18.1	43.9
1983	18.1	42.6
1984	18.3	44.3
1985	19.3	43.8
1986	17.7	46.1
1987	20.8	46.4
1988	20.6	47.1
1989	12.8	45.6
1990	11.5	44.6
1991	11.3	41.5
1992 ^P	10.0	39.2

^P preliminary.

* National Safety Council procedures for estimating the number of accidents were changed in 1989.

Thus, 1989-1992 data are not comparable to previous years.

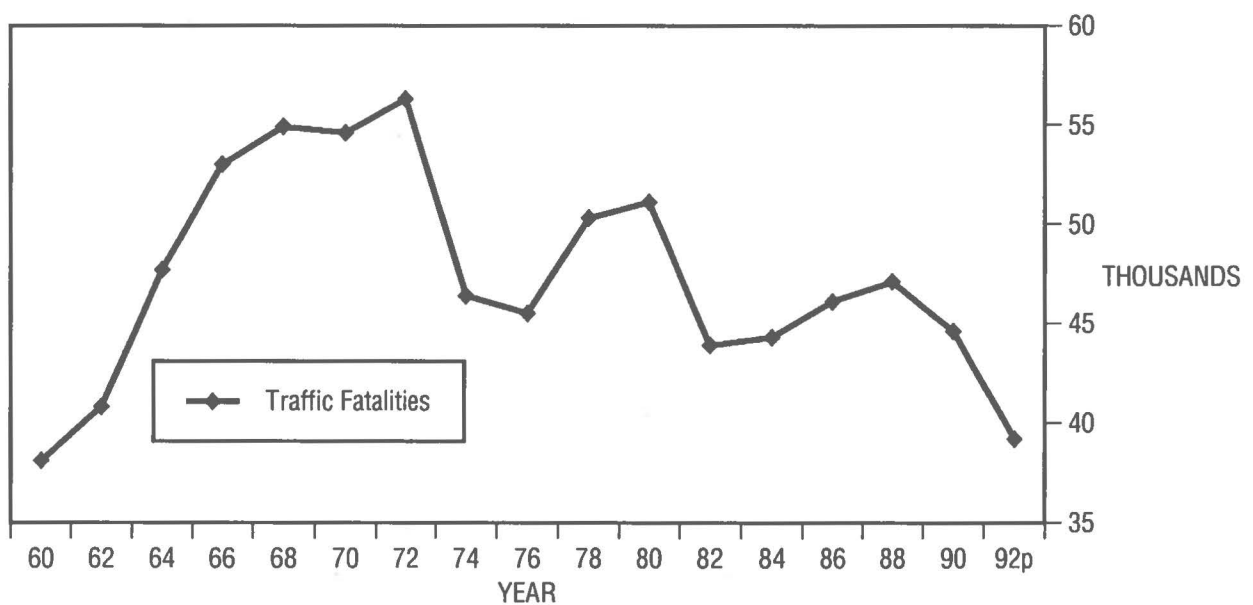
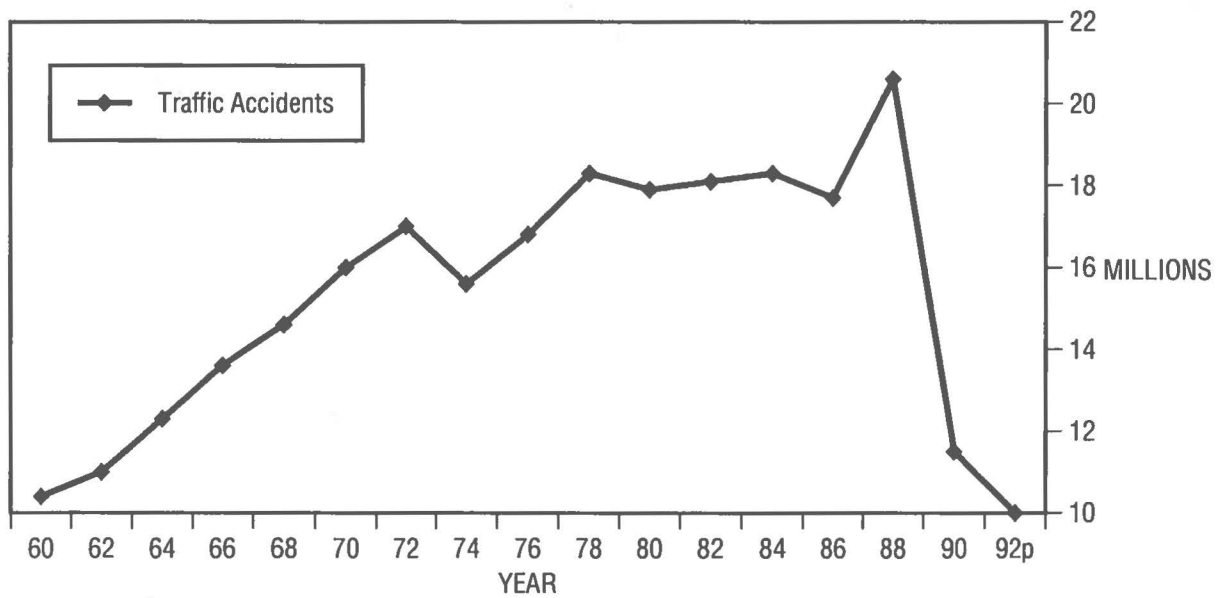
Note: Fatalities in this chart are based on a 30-day definition, and include 50 states and the District of Columbia.

Source: 1960-1967: National Safety Council, *Accident Facts*, 1992.

1968-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1991.

1991-1992: Fatality Data: *Ibid.*, NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

Accident Data: National Safety Council, estimated.



p preliminary.
Source: See Table 29.

Figure 26. Motor Vehicle Traffic Accidents and Traffic Fatalities, 1960-1992

Table 30. Motor Vehicle Traffic Fatality Rates per Vehicle-Miles, 1960-1992

Year	Billions	Per 100 Million Vehicle-Miles
	Vehicle-Miles	Traffic Fatality Rates
1960	719	5.30
1961	738	5.16
1962	767	5.32
1963	805	5.41
1964	847	5.63
1965	888	5.54
1966	926	5.73
1967	964	5.49
1968	1,016	5.17
1969	1,062	5.25
1970	1,110	4.92
1971	1,179	4.61
1972	1,260	4.47
1973	1,313	4.23
1974	1,281	3.62
1975	1,327	3.36
1976	1,402	3.25
1977	1,467	3.26
1978	1,545	3.26
1979	1,529	3.34
1980	1,527	3.35
1981	1,553	3.17
1982	1,595	2.76
1983	1,653	2.58
1984	1,720	2.57
1985	1,774	2.47
1986	1,838	2.51
1987	1,924	2.41
1988	2,026	2.32
1989	2,082	2.19
1990	2,148	2.08
1991	2,172	1.91
1992 ^P	2,237	1.75

^P preliminary.

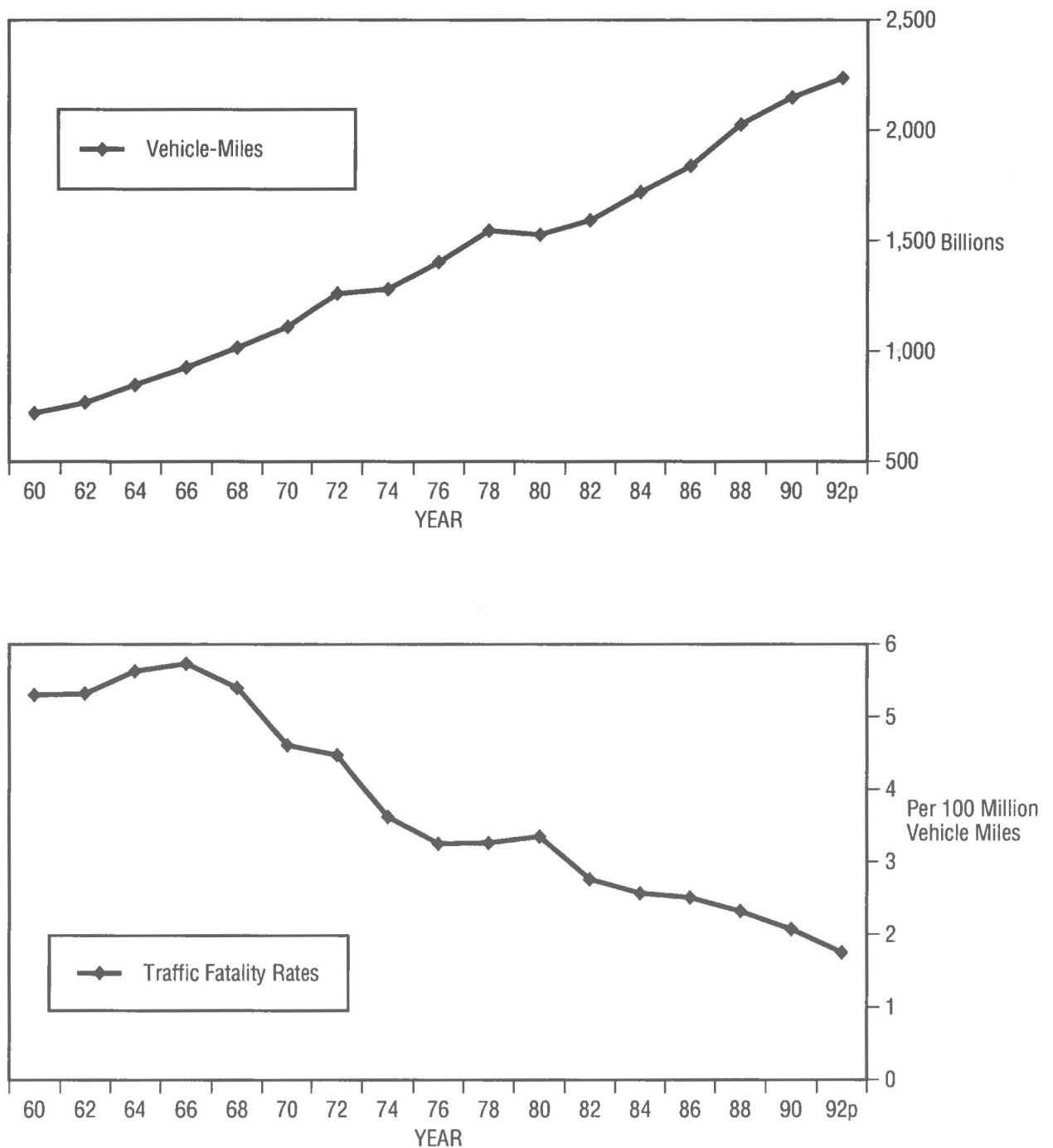
Source: Vehicle-Miles: 1960-1984: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues.

Fatality Rates: 1960-1967: National Safety Council, *Accident Facts*, 1992.

1968-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1991.

1991-1992: *Ibid.*, FHWA, Office of Highway Safety, HHS-12.



p preliminary.
 Source: See Table 30.

Figure 27. Motor Vehicle Traffic Fatality Rates per Vehicle-Miles, 1960-1992

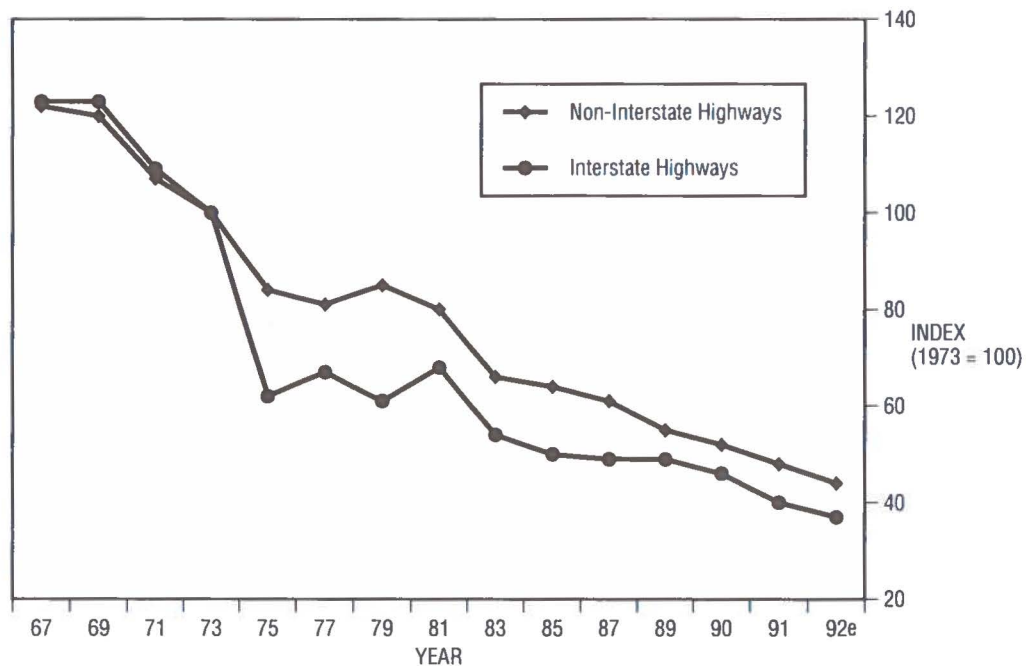
Table 31. Motor Vehicle Fatal Accidents by Posted Speed Limit, 1975-1992

Year	Posted Speed									
	0-25 MPH	26-35 MPH	36-45 MPH	46-54 MPH	Total Under 55 MPH	55 MPH	60 MPH	65 MPH	Unknown	Total
1975	2,617	6,099	4,276	2,241	15,233	16,093	-	-	7,831	39,157
1976	2,394	6,235	4,508	2,284	15,421	16,364	-	-	7,962	39,747
1977	2,592	6,913	5,143	2,513	17,161	18,355	-	-	6,694	42,210
1978	2,744	7,678	5,868	2,364	18,654	20,270	-	-	5,509	44,433
1979	2,935	8,145	6,148	2,454	19,682	20,234	-	-	5,307	45,223
1980	2,865	8,527	6,256	2,431	20,079	20,352	-	-	4,853	45,284
1981	2,532	7,867	6,105	2,322	18,826	19,915	-	-	5,259	44,000
1982	2,425	7,491	6,000	2,079	17,995	18,707	-	-	2,390	39,092
1983	2,294	7,493	6,129	2,043	17,959	18,519	-	-	1,498	37,976
1984	2,309	7,917	6,660	2,053	18,939	19,369	-	-	1,314	39,622
1985	2,504	7,889	6,813	2,072	19,278	18,862	-	-	1,055	39,195
1986	2,391	8,258	7,179	2,180	20,008	19,890	-	-	1,192	41,090
1987	2,422	8,150	7,131	2,213	19,916	19,387	12	1,147	976	41,438
1988	2,337	8,429	7,146	2,209	20,121	18,883	8	2,053	1,065	42,130
1989	2,329	7,945	7,077	2,128	19,479	18,069	16	2,081	1,073	40,718
1990	2,234	7,756	7,092	2,054	19,136	17,556	18	2,175	951	39,836
1991	2,097	6,908	6,608	1,894	17,507	16,543	9	2,078	800	36,937
1992 ^P	1,909	6,688	6,337	1,873	16,807	15,434	4	2,000	683	34,928

^P preliminary.

Source: 1975-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

1991-1992: *Ibid.*, NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).



Year	Index (1973 = 100)	
	Non-Interstate Highways	Interstate Highways
1967	122	123
1968	122	125
1969	120	123
1970	116	118
1971	107	109
1972	102	104
1973	100	100
1974	88	68
1975	84	62
1976	81	60
1977	81	67
1978	81	69
1979	85	61
1980	85	68
1981	80	68
1982	70	57
1983	66	54
1984	66	54
1985	64	50
1986	63	47
1987	61	49
1988	58	52
1989	55	49
1990	52	46
1991	48	40
1992 ^e	44	37

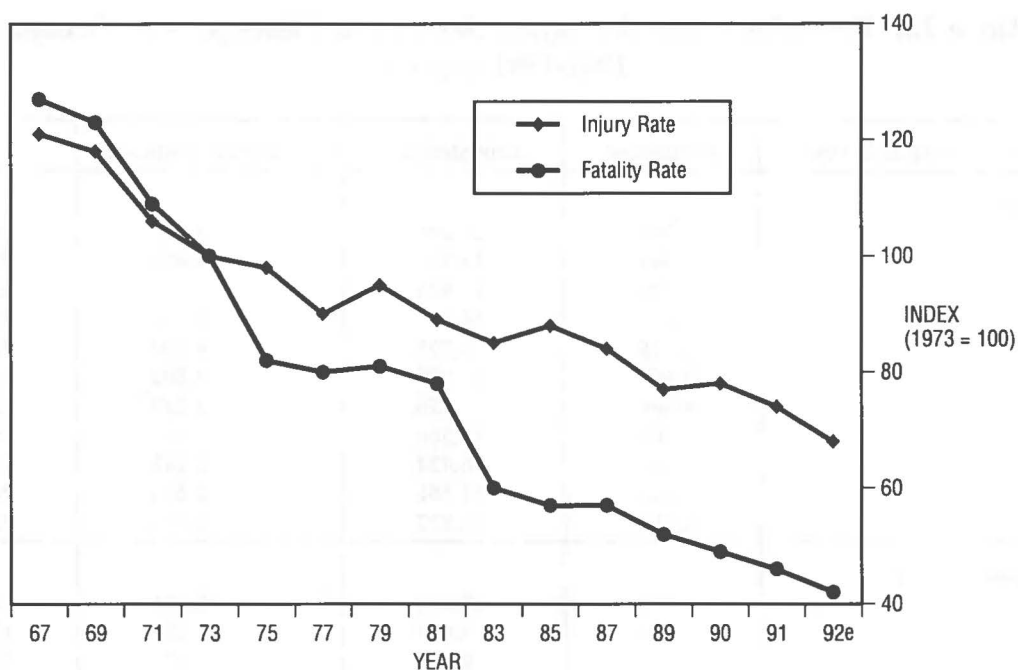
^e estimate.

Note: Index based on number of fatalities per 100 million vehicle-miles of travel.

Source: 1967-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1991.

1991-1992: *Ibid.*, FHWA, Office of Highway Safety, HHS-12.

Figure 28. Fatality Rates by Highway Type, 1967-1992



* estimate.

Note: Index based on number of persons killed or injured per 100 million vehicle-miles of travel.

Source: 1967-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1991.
1991-1992: *Ibid.*, FHWA, Office of Highway Safety, HHS-12.

Figure 29. Highway Fatality and Injury Rates, 1967-1992

**Table 32. Restraint Usage and Injury Severity of Passenger Car Occupants,
1981-1991** (page 1 of 2)

Injury Severity and Year	Restrained	Unrestrained	Unknown Restraint	Total
Fatal Injury				
1981	568	21,086	4,891	26,545
1982	584	18,104	4,410	23,098
1983	748	17,895	4,332	22,975
1984	1,057	18,001	4,550	23,608
1985	2,115	16,773	4,304	23,192
1986	3,557	17,585	3,802	24,944
1987	4,504	17,276	3,352	25,132
1988	5,380	17,566	2,862	25,808
1989	5,569	16,734	2,743	25,046
1990	5,728	15,661	2,636	24,025
1991	6,216	13,827	2,304	22,347
Incapacitating Injury				
1981	330	10,995	2,164	13,489
1982	341	9,625	2,150	12,116
1983	529	9,002	2,181	11,712
1984	777	9,072	2,084	11,933
1985	1,543	8,649	1,929	12,121
1986	2,564	8,838	1,726	13,128
1987	3,230	8,560	1,645	13,435
1988	3,621	8,030	1,483	13,134
1989	3,709	7,533	1,404	12,646
1990	3,686	6,762	1,304	11,752
1991	3,881	5,867	1,089	10,837
Nonincapacitating Injury				
1981	310	6,901	2,236	9,447
1982	310	5,843	1,790	7,943
1983	464	5,844	1,750	8,058
1984	666	5,709	1,833	8,208
1985	1,314	4,695	1,721	7,730
1986	2,006	4,540	1,432	7,978
1987	2,567	4,400	1,096	8,063
1988	2,927	4,539	844	8,310
1989	3,083	4,393	758	8,234
1990	3,183	3,994	778	7,955
1991	3,190	3,395	633	7,218
Possible Injury				
1981	198	2,962	785	3,945
1982	163	2,268	680	3,111
1983	207	1,984	673	2,864
1984	351	1,998	764	3,113
1985	695	1,721	691	3,107
1986	1,310	1,577	667	3,554
1987	1,805	1,520	522	3,847
1988	2,044	1,632	374	4,050
1989	2,256	1,624	359	4,239
1990	2,404	1,501	361	4,266
1991	2,324	1,308	303	3,935

**Table 32. Restraint Usage and Injury Severity of Passenger Car Occupants,
1981-1991** (page 2 of 2)

Injury Severity and Year	Restrained	Unrestrained	Unknown Restraint	Total
No Injury				
1981	485	8,523	3,456	12,464
1982	533	7,857	3,373	11,763
1983	765	7,347	3,412	11,524
1984	1,079	7,274	3,733	12,086
1985	2,574	5,647	3,929	12,150
1986	4,175	4,655	3,686	12,516
1987	5,567	3,812	3,118	12,497
1988	6,245	3,620	2,422	12,287
1989	5,938	3,000	2,166	11,104
1990	6,131	2,528	2,306	10,965
1991	5,785	2,077	1,981	9,843
Unknown				
1981	12	276	107	395
1982	10	287	315	612
1983	7	93	241	341
1984	9	125	251	385
1985	83	350	314	747
1986	155	336	333	824
1987	174	300	314	788
1988	204	310	306	820
1989	86	134	267	487
1990	68	119	296	483
1991	76	93	294	463
Total				
1981	1,903	50,743	13,639	66,285
1982	1,941	43,984	12,718	58,643
1983	2,720	42,165	12,589	57,474
1984	3,939	42,179	13,215	59,333
1985	8,324	37,835	12,888	59,047
1986	13,767	37,531	11,646	62,944
1987	17,847	35,868	10,047	63,762
1988	20,421	35,697	8,291	64,409
1989	20,641	33,418	7,697	61,756
1990	21,200	30,565	7,681	59,446
1991	21,472	26,567	6,604	54,643

Source: U.S. DOT/NHTSA, *Fatal Accident Reporting System 1991*, Table 98 and similar table in earlier editions.

Table 33. Fatalities by Highest Blood Alcohol Concentration (BAC) in the Crash, 1982-1991

Year	BAC = 0.00		BAC = 0.01 - 0.09		BAC = 0.10+		Total	Total Fatalities in Alcohol-Related Crashes	
	Number	Percent	Number	Percent	Number	Percent		Number	Percent
1982	18,780	42.7	4,809	10.9	20,356	46.3	43,945	25,165	57.3
1983	18,943	44.5	4,472	10.5	19,174	45.0	42,589	23,646	55.5
1984	20,499	46.3	4,766	10.8	18,992	42.9	44,257	23,758	53.7
1985	21,109	48.2	4,604	10.5	18,111	41.3	43,825	22,715	51.8
1986	22,042	47.8	5,109	11.1	18,936	41.1	46,087	24,045	52.2
1987	22,749	49.0	5,112	11.0	18,529	39.9	46,390	23,641	51.0
1988	23,461	49.8	4,895	10.4	18,731	39.8	47,087	23,626	50.2
1989	23,146	50.8	4,574	10.0	17,862	39.2	45,582	22,436	49.2
1990	22,515	50.5	4,434	9.9	17,650	39.6	44,599	22,084	49.5
1991	21,563	52.0	3,956	9.5	15,944	38.5	41,462	19,900	48.0

Source: U.S. DOT/NHTSA, *Fatal Accident Reporting System 1991*, Table 12.

Table 34. Motor Carrier* Accidents, Fatalities, and Injuries by Type of Carrier, 1965-1992

Year	Classification								
	Motor Carriers of Property			Motor Carriers of Passengers			All Motor Carriers		
	Accidents	Fatalities	Injuries	Accidents	Fatalities	Injuries	Accidents	Fatalities	Injuries
1965	31,132	1,603	18,737	-	-	-	-	-	-
1970	40,233	1,367	18,122	-	-	-	-	-	-
1973	-	-	-	-	-	-	30,911	3,058	35,245
1974	25,358	2,429	26,911	708	77	2,153	26,066	2,506	29,064
1975	24,274	2,232	26,374	765	59	2,188	25,039	2,291	28,562
1976	25,666	2,520	26,794	624	62	1,723	26,290	2,582	28,517
1977	29,936	2,983	31,698	830	87	1,929	30,766	3,070	33,627
1978	33,998	2,998	32,757	728	68	1,917	34,726	3,066	34,674
1979	35,541	3,072	32,126	719	60	1,977	36,260	3,132	34,103
1980	31,391	2,528	27,147	748	74	1,711	32,139	2,602	28,858
1981	27,772	2,810	28,533	832	95	2,041	28,604	2,905	30,574
1982	27,001	2,456	26,117	855	76	1,970	27,856	2,532	28,087
1983	26,032	2,528	26,692	711	67	1,827	26,743	2,595	28,519
1984	29,579	2,721	29,149	628	57	1,505	30,207	2,778	30,654
1985	29,068	2,646	28,988	676	62	1,825	29,744	2,708	30,813
1986	26,229	2,616	25,106	400	100	1,176	26,629	2,716	26,282
1987	27,479	2,907	28,018	558	89	2,059	28,037	2,996	30,077
1988	32,778	3,309	31,295	660	64	2,042	33,438	3,373	33,337
1989	35,341	3,451	34,653	692	74	2,392	36,033	3,525	36,695
1990	35,885	3,309	34,348	698	75	2,109	36,583	3,384	36,457
1991	34,405	3,036	32,889	707	46	1,976	35,112	3,082	34,865
1992 ^P	13,302	936	12,259	722	64	2,054	14,024	1,000	14,313

^P preliminary.

* Includes only those motor carriers operating in interstate or foreign commerce.

Source: U.S. DOT/FHWA, State Programs Division, HFO-30.

Table 35. Waterborne Transport Accidents, Fatalities and Injuries Resulting from Vessel Casualties, 1968-1991

Year	Accidents	Injuries	Fatalities	Vessels*
1968	2,570	-	140	4,011
1969	2,684	-	217	4,183
1970	2,582	105	178	4,063
1971	2,577	163	243	4,152
1972	2,424	110	177	4,117
1973	3,108	74	128	5,224
1974	3,388	104	218	5,522
1975	3,310	97	243	5,685
1976	3,542	154	248	6,093
1977	3,885	127	157	6,616
1978	4,521	112	186	7,495
1979	4,932	115	174	8,420
1980	4,624	176	206	7,694
1981	3,503	141	154	5,695
1982	3,174	271	223	5,457
1983	4,704	209	289	7,077
1984	3,275	134	113	5,398
1985	3,439	172	131	5,694
1986	3,366	139	133	5,205
1987	3,496	191	119	5,538
1988	3,593	130	81	5,694
1989	3,852	168	96	5,533
1990	3,613	175	85	5,494
1991 ^P	2,222	110	30	3,514

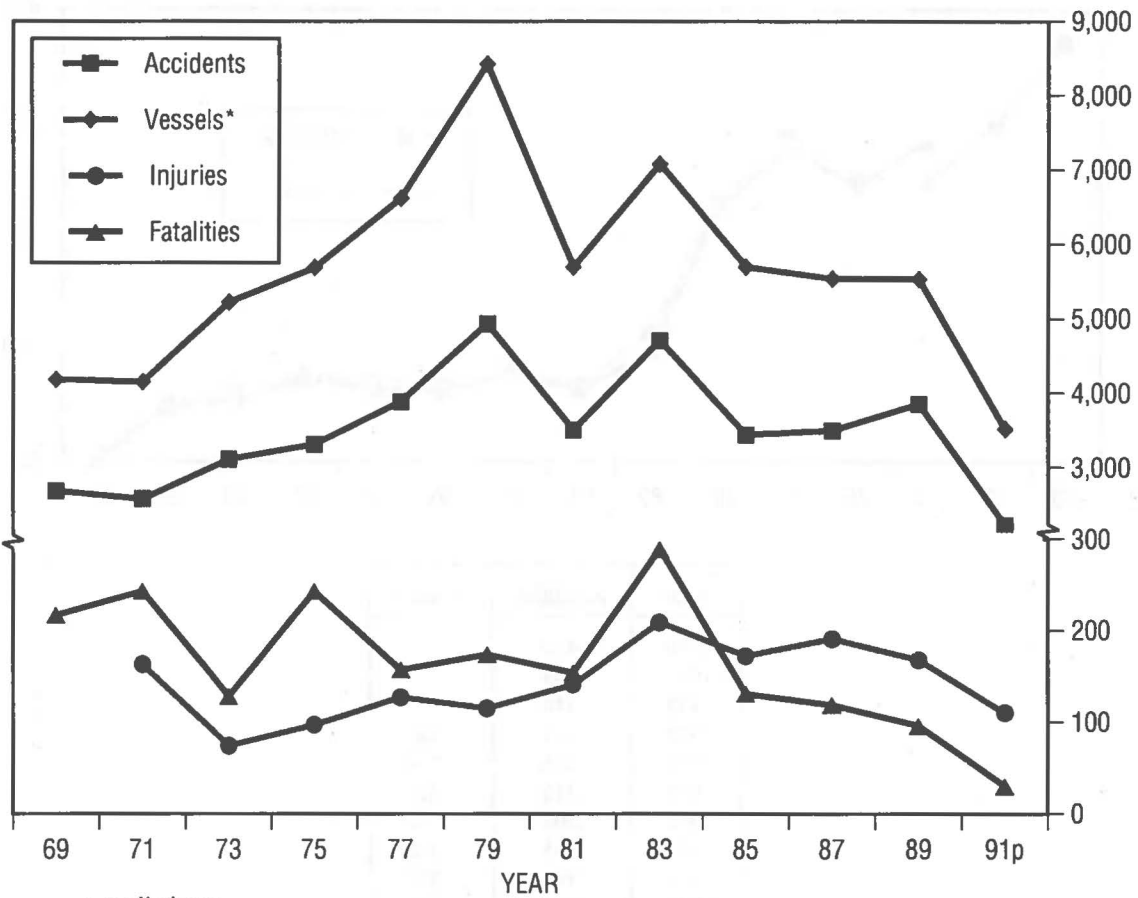
^P preliminary.

* More than one vessel may be involved in a marine accident.

Note: All deaths and injuries cited result from vessel casualties.

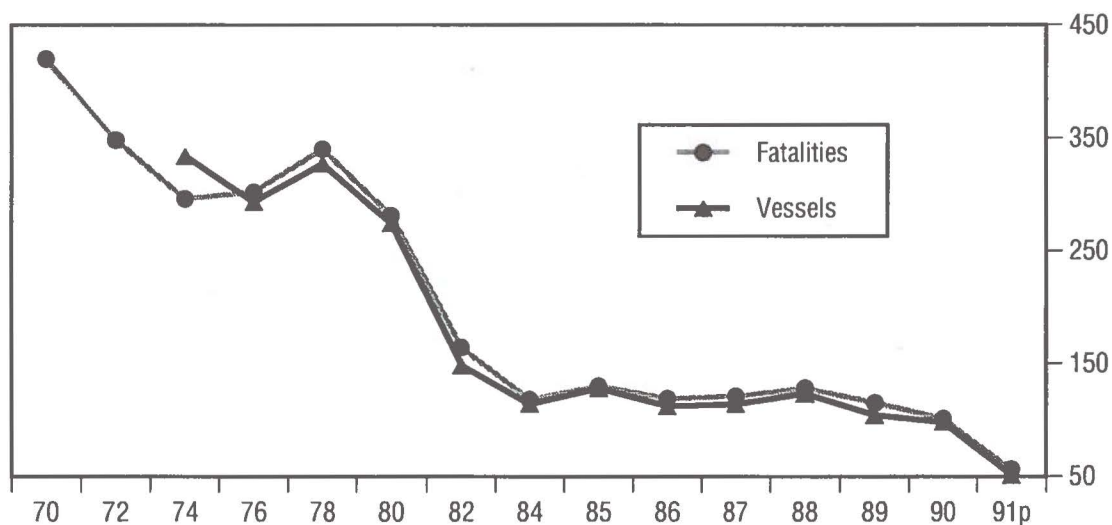
Source: 1968-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1991.

1991: *Ibid.*, United States Coast Guard, Marine Investigation Division, G-MMI-3.



p preliminary.
Source: See Table 35.

Figure 30. Waterborne Transport Accidents, Fatalities, and Injuries Resulting from Vessel Casualties, 1969-1991



Year	Fatalities	Vessels
1970	420	-
1971	389	-
1972	348	-
1973	333	297
1974	296	334
1975	330	321
1976	302	293
1977	305	302
1978	340	327
1979	342	326
1980	281	274
1981	163	137
1982	164	148
1983	162	143
1984	118	114
1985	130	128
1986	119	112
1987	121	114
1988	128	123
1989	115	104
1990	101	98
1991 ^P	56	51

^P preliminary.

Source: 1970-1990: U.S. DOT/RSPA/
Volpe Center, *Transportation
Safety Information Report*,
annual issues, 1978-1991.

1991: *Ibid.*, United States Coast
Guard, Marine Investigation
Division, G-MMI-3.

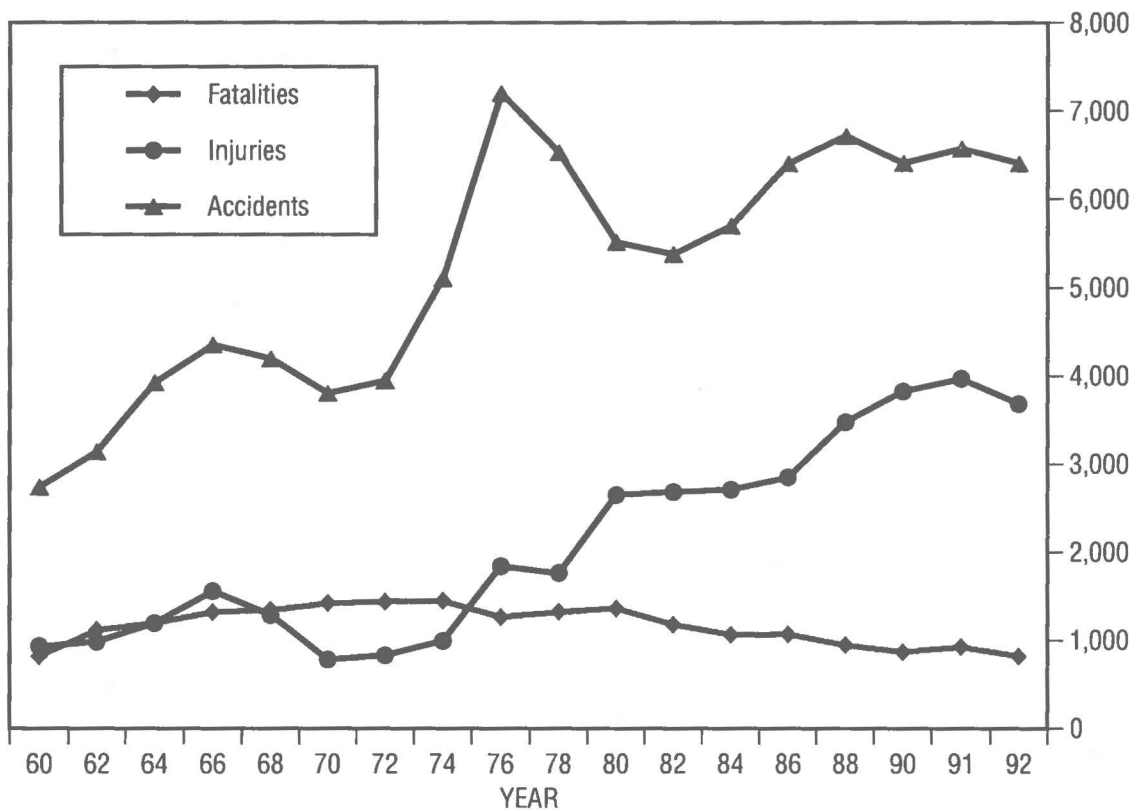
Figure 31. Waterborne Transport Fatalities not Related to Vessel Casualties, 1970-1991

Table 36. Recreational Boating Fatalities, Accidents, and Injuries, 1960-1992

Year	Fatalities	Injuries	Accidents
1960	819	929	2,738
1961	1,218	1,098	3,282
1962	1,114	980	3,139
1963	1,167	1,164	3,527
1964	1,192	1,193	3,922
1965	1,360	927	3,752
1966	1,318	1,555	4,350
1967	1,312	1,365	4,113
1968	1,342	1,284	4,195
1969	1,350	1,004	4,067
1970	1,418	780	3,803
1971	1,582	897	3,909
1972	1,437	829	3,942
1973	1,754	1,559	5,322
1974	1,446	993	5,104
1975	1,466	2,136	6,308
1976	1,264	1,838	7,199
1977	1,312	1,779	6,815
1978	1,321	1,761	6,529
1979	1,400	2,463	5,368
1980	1,360	2,650	5,513
1981	1,208	2,474	5,208
1982	1,178	2,682	5,377
1983	1,241	2,913	5,569
1984	1,063	2,709	5,700
1985	1,116	2,757	6,237
1986	1,066	2,847	6,407
1987	1,036	3,501	6,746
1988	946	3,476	6,718
1989	896	3,635	6,063
1990	865	3,822	6,411
1991	924	3,967	6,573
1992	816	3,683	6,408

Note: Only a small fraction of property damages and non-fatal accidents are reported to the Coast Guard.

Source: U.S. DOT/USCG, *Boating Statistics*, 1992, and earlier editions.



Source: See Table 36.

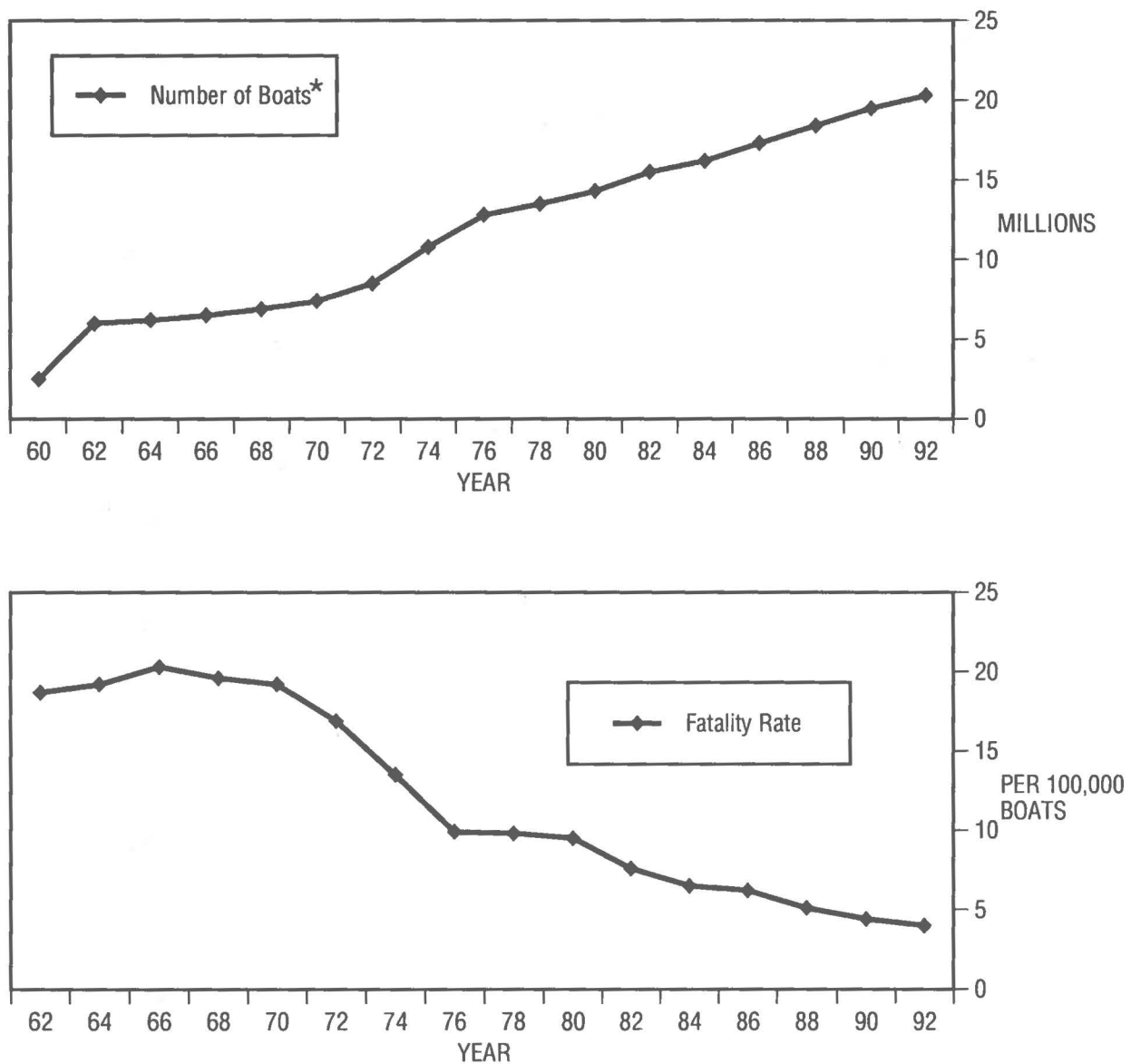
Figure 32. Recreational Boating Fatalities, Accidents, and Injuries, 1960-1992

**Table 37. Recreational Boating Fatality Rates
per Number of Boats,
1960-1992**

Year	Number of Boats* (Millions)	Fatality Rate per 100,000 Boats
1960	2.5	-
1961	3.1	-
1962	6.0	18.7
1963	6.1	19.3
1964	6.2	19.2
1965	6.4	21.4
1966	6.5	20.3
1967	6.7	19.7
1968	6.9	19.6
1969	7.1	19.0
1970	7.4	19.2
1971	7.9	20.2
1972	8.5	16.9
1973	9.5	18.3
1974	10.8	13.5
1975	11.8	12.4
1976	12.8	9.9
1977	13.2	10.0
1978	13.5	9.8
1979	13.9	10.1
1980	14.3	9.5
1981	15.1	8.0
1982	15.5	7.6
1983	15.8	7.9
1984	16.3	6.5
1985	16.7	6.7
1986	17.3	6.2
1987	17.7	5.9
1988	18.4	5.1
1989	19.0	4.7
1990	19.5	4.4
1991	20.0	4.6
1992	20.3	4.0

The total number of boats are
estimated by the United States
Coast Guard each year.

Source: U.S. DOT/USCG, *Boating Statistics*,
1992, and earlier editions.



* The total number of boats are estimated by the United States Coast Guard each year.
Source: See Table 37.

Figure 33. Recreational Boating Fatality Rates per Number of Boats, 1960-1992

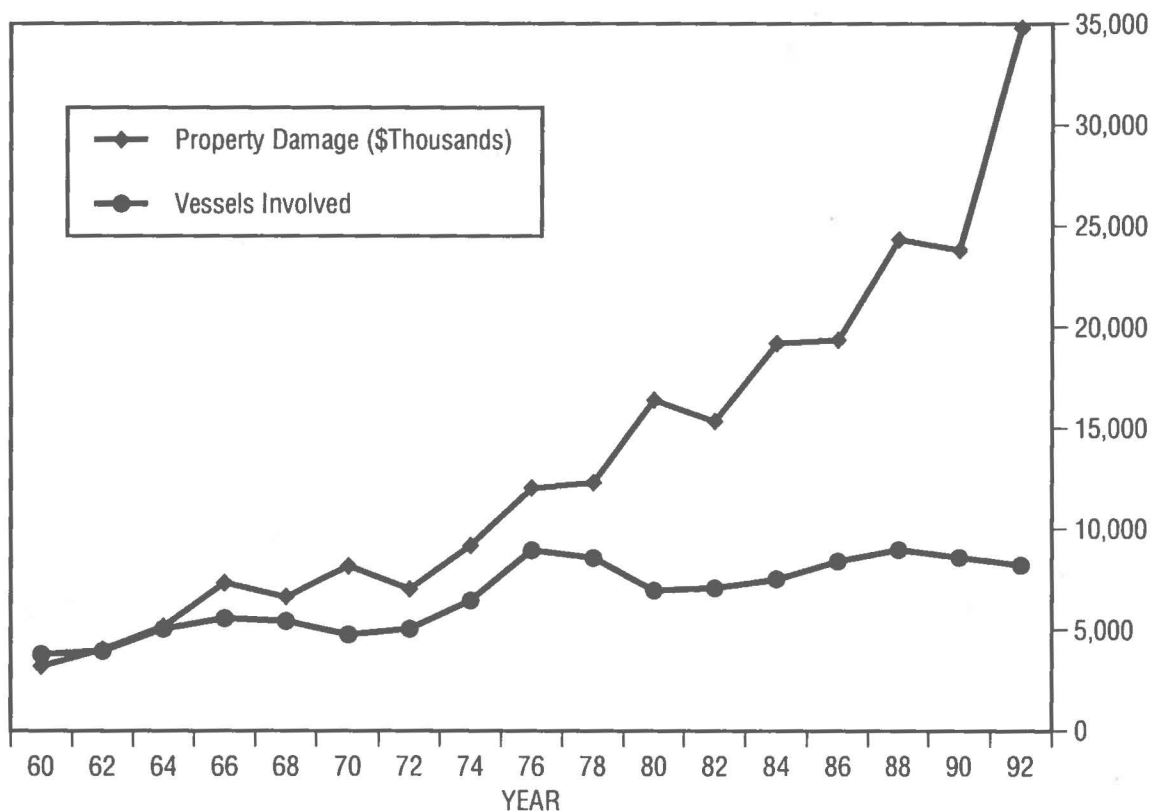
**Table 38. Number of Vessels Involved in Recreational Boating
Accidents and Reported Property Damage,
1960-1992**

Year	Property Damage (\$Thousands)	Vessels Involved
1960	3,192	3,785
1961	4,378	4,199
1962	4,029	3,952
1963	4,802	4,441
1964	5,172	5,046
1965	4,743	4,792
1966	7,335	5,567
1967	6,054	5,274
1968	6,632	5,427
1969	6,372	5,239
1970	8,173	4,762
1971	9,022	4,915
1972	7,017	5,044
1973	11,377	6,738
1974	9,182	6,449
1975	10,352	8,002
1976	12,027	8,954
1977	11,573	8,554
1978	12,301	8,576
1979	15,311	6,603
1980	16,385	6,954
1981	13,659	6,573
1982	15,334	7,071
1983	15,731	7,344
1984	19,193	7,510
1985	20,039	8,305
1986	19,358	8,399
1987	21,386	9,020
1988	24,332	8,981
1989	25,233	8,020
1990	23,809	8,591
1991	24,772	8,821
1992 ^P	34,800	8,206

^P preliminary.

Note: Only a small fraction of property damage-only accidents is reported to the Coast Guard.

Source: U.S. DOT/USCG, Boating Statistics, 1992, and earlier editions.



Source: See Table 38.

Figure 34. Number of Vessels Involved in Recreational Boating Accidents and Reported Property Damage, 1960-1992

Table 39. Railroad Fatalities and Injuries by Type of Person, 1977-1992

Year	Employees on Duty		Employees Not on Duty		Passengers on Trains		Nontrespassers	
	Fatalities	Injuries**	Fatalities	Injuries**	Fatalities	Injuries**	Fatalities	Injuries**
1977	114	-	2	-	4	-	949	-
1978	122	-	9	-	13	-	1,008	-
1979	101	66,924	1	872	6	1,001	796	4,483
1980	97	56,331	4	671	4	593	739	3,849
1981	65	47,838	2	645	4	409	626	3,278
1982	78	36,032	2	509	9	387	525	2,595
1983	61	30,416	3	395	4	502	527	2,728
1984	59	33,364	5	444	12	1,000	576	2,881
1985	46	29,822	2	419	3	657	507	2,562
1986	57	22,387	2	384	4	686	505	2,639
1987	55	21,982	1	396	16	475	506	2,354
1988	43	22,573	1	427	2	337	554	2,575
1989	49	22,183	1	407	8	399	621	2,579
1990	40	21,010	0	326	3	476	551	2,890
1991	35	18,963	1	355	8	382	484	2,110
1992	35	16,762	1	304	3	399	473	1,891

Year	Trespassers		Contractor Employees		Railroad and Grade Crossing			
					Railroad Only*		Grade Crossing Only	
	Fatalities	Injuries**	Fatalities	Injuries**	Fatalities	Injuries**	Fatalities	Injuries**
1977	458	-	3	-	534	62,969	996	4,898
1978	492	-	2	-	582	68,097	1,064	4,448
1979	516	805	9	41	546	69,748	883	4,378
1980	566	728	7	74	584	58,356	833	3,890
1981	582	761	5	72	556	49,710	728	3,293
1982	501	671	4	81	512	37,638	607	2,637
1983	472	683	6	95	498	32,196	575	2,623
1984	588	773	7	108	598	35,660	649	2,910
1985	474	734	4	110	454	31,617	582	2,687
1986	519	706	4	121	475	24,465	616	2,458
1987	584	673	3	153	541	23,604	624	2,429
1988	598	920	1	222	510	24,465	689	2,589
1989	641	898	4	249	523	23,847	801	2,868
1990	700	1,493	3	245	599	22,736	698	2,407
1991	769	663	3	217	586	20,707	608	2,089
1992	769	646	11	226	592	18,388	577	1,963

* Includes train and non-train data.

** Includes occupational illness.

Source: 1977-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
1991-1992: *Ibid.*, FRA, Systems Support Division, RRS-22.

Table 40. Train Accident Fatalities, Injuries, and Accidents by Type, 1978-1992

Year	Fatalities			Injuries			Accidents		
	Derailments	Collisions	Other	Derailments	Collisions	Other	Derailments	Collisions	Other
1978	28	13	4	405	991	67	8,904	1,432	766
1979	8	15	0	434	626	39	7,562	1,446	590
1980	8	20	1	286	341	38	6,442	1,201	526
1981	5	5	3	221	150	47	4,366	776	440
1982	8	4	2	200	109	49	3,383	572	456
1983	8	11	0	179	116	60	3,006	418	352
1984	11	15	1	217	427	56	2,903	419	379
1985	2	6	0	197	223	56	2,495	366	414
1986	6	6	0	701	204	31	2,006	320	294
1987	2	28	6	124	287	42	1,859	287	366
1988	0	11	7	237	148	86	2,054	315	485
1989	7	7	2	134	179	58	2,129	305	464
1990	2	8	0	272	139	40	2,146	315	418
1991	10	5	4	174	103	49	1,936	262	461
1992	2	1	3	71	54	45	1,726	206	407

Source: 1978-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
1991-1992: *Ibid.*, FRA, Systems Support Division, RRS-22.

Table 41. Railroad Accidents and Fatalities, and Rail-Highway Grade Crossing Fatalities, 1968-1992

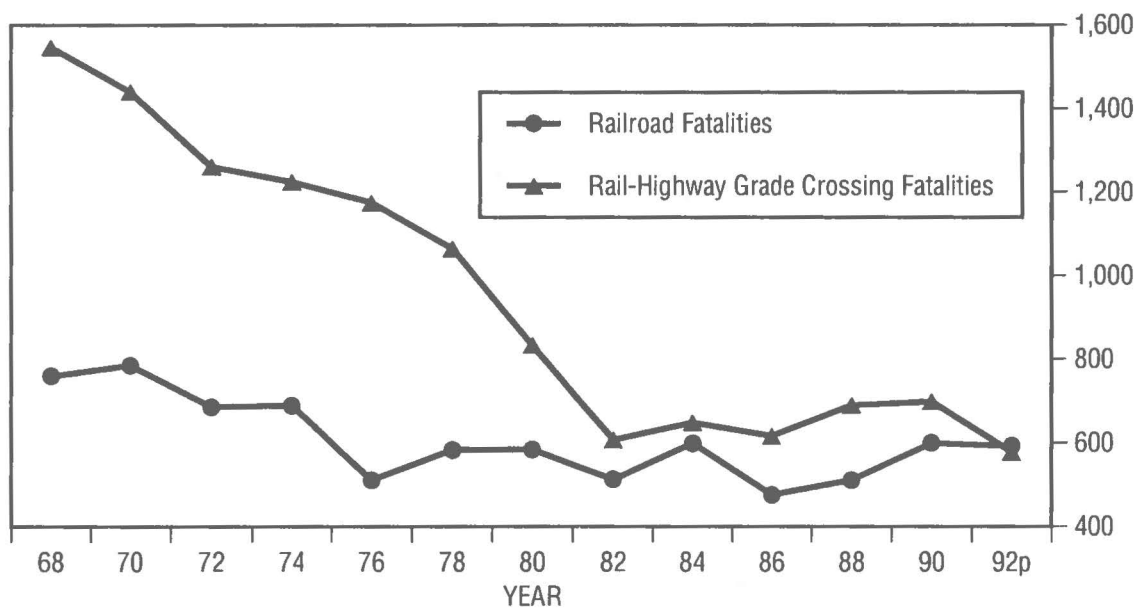
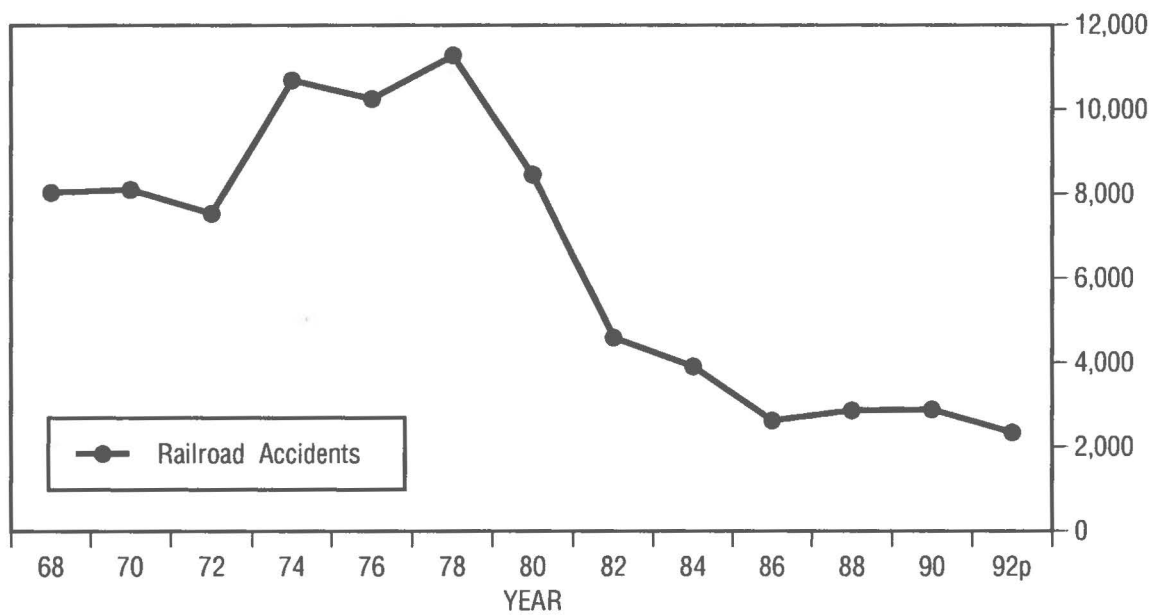
Year	Railroad Accidents*	Railroad Fatalities**	Rail-Highway Grade Crossing Fatalities
1968	8,028	759	1,546
1969	8,543	752	1,490
1970	8,095	785	1,440
1971	7,304	654	1,356
1972	7,532	685	1,260
1973	9,698	730	1,186
1974	10,694	689	1,224
1975	8,041	575	966
1976	10,248	510	1,174
1977	10,362	534	996
1978	11,277	582	1,064
1979	9,740	546	883
1980	8,451	584	833
1981	5,781	556	728
1982	4,589	512	607
1983	3,906	498	575
1984	3,900	598	649
1985	3,275	454	582
1986	2,620	475	616
1987	2,512	541	624
1988	2,854	510	689
1989	2,898	523	801
1990	2,879	599	698
1991	2,659	586	608
1992 ^P	2,339	592	577

^P preliminary.

* Train accidents only--also includes those Rail-Highway Grade Crossing accidents which have been classified as Train accidents.

** Fatalities resulting from train accidents, train incidents and nontrain incidents.

Source: 1968-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1991.
1991-1992: *Ibid.*, FRA, Systems Support Division, RRS-22.



p preliminary.
Source: See Table 41.

Figure 35. Railroad Accidents and Fatalities, and Rail-Highway Grade Crossing Fatalities, 1968-1992

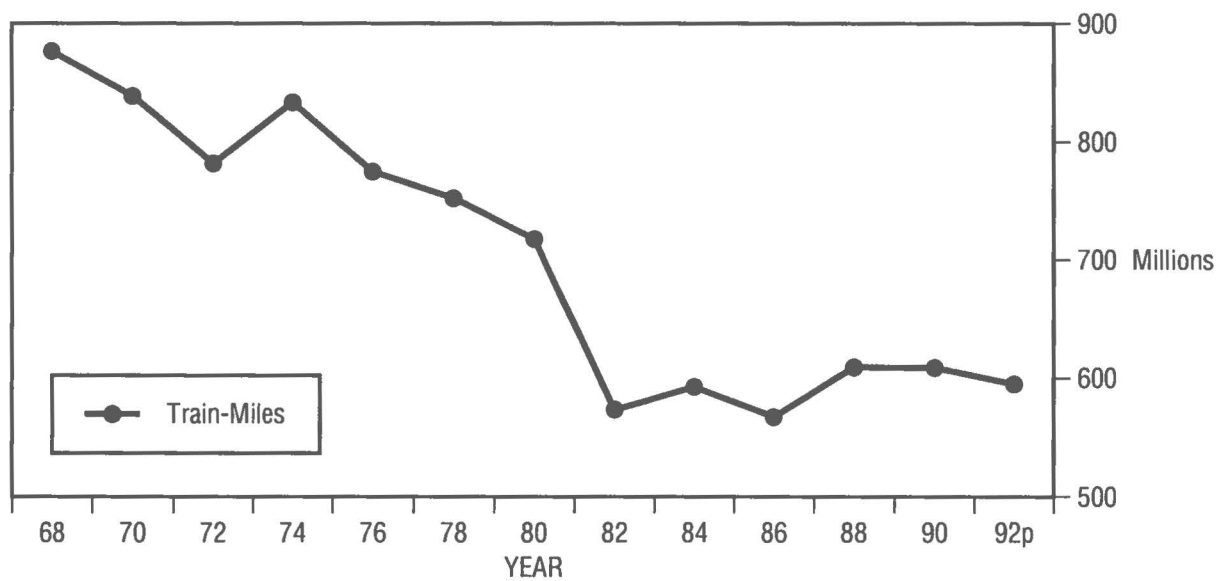
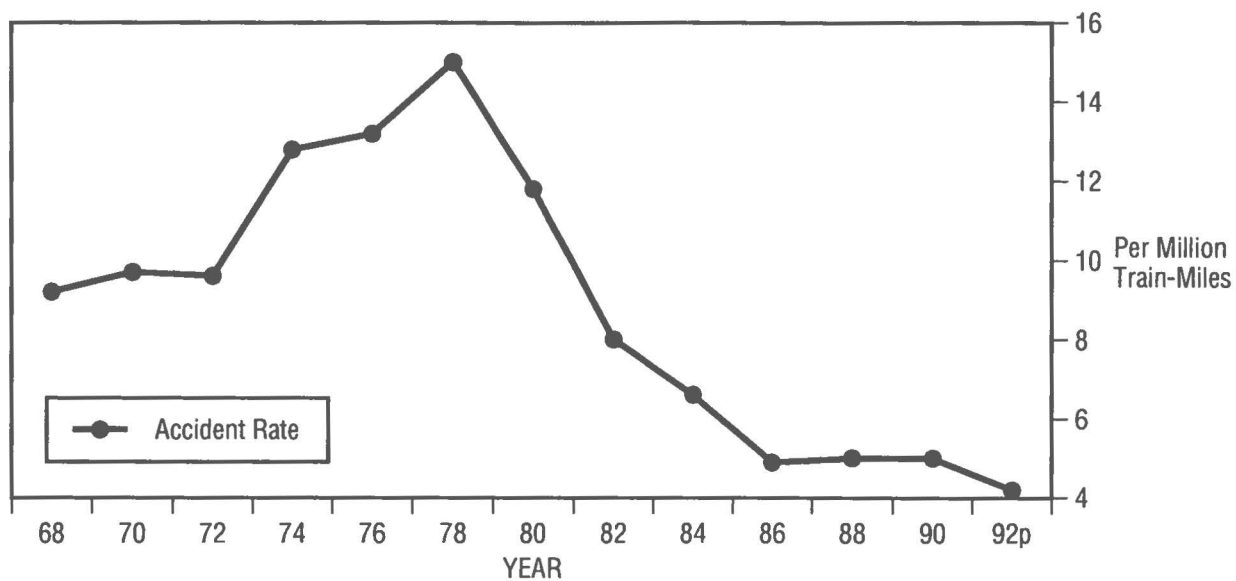
**Table 42. Railroad* Accident Rates per Train-Miles,
1968-1992**

Year	Accident Rate	Train-Miles (millions)
1968	9.2	876.5
1969	9.9	864.1
1970	9.7	838.7
1971	9.3	783.8
1972	9.6	781.4
1973	11.7	831.3
1974	12.8	833.3
1975	10.7	755.0
1976	13.2	774.8
1977	13.8	750.0
1978	15.0	752.0
1979	12.8	763.4
1980	11.8	717.6
1981	8.6	676.2
1982	8.0	573.4
1983	7.0	558.2
1984	6.6	592.6
1985	6.0	570.9
1986	4.9	567.1
1987	4.6	581.3
1988	5.0	609.3
1989	4.9	620.6
1990	5.0	608.8
1991	4.9	576.8
1992 ^P	4.2	595.0

^P preliminary.

* Train accidents only--also includes those Rail-Highway Grade Crossing accidents which have been classified as Train accidents.

Source: 1968-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1991.
1991-1992: *Ibid.*, FRA, Systems Support Division, RRS-22.



p preliminary.
Source: See Table 42.

Figure 36. Railroad Accident Rate per Train-Miles, 1968-1992

Table 43. Liquid and Gas Pipeline Failures, 1968-1992

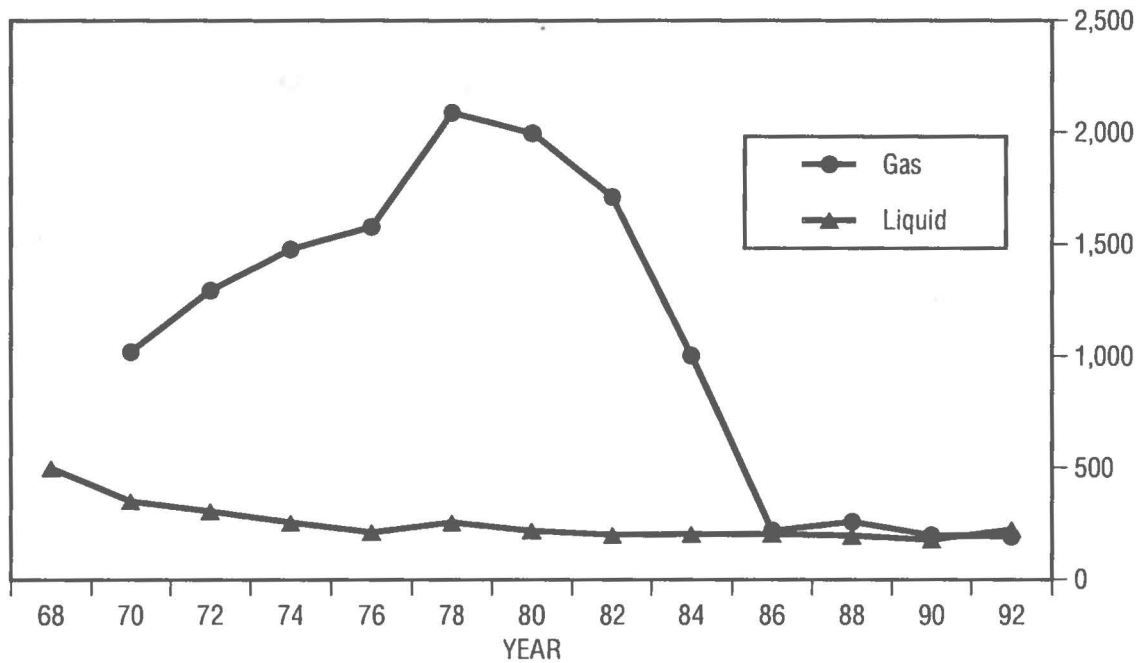
Year	Failures	
	Gas	Liquid
1968	-	499
1969	-	403
1970	1,019	351
1971	1,287	310
1972	1,293	306
1973	1,364	273
1974	1,477	256
1975	1,373	254
1976	1,579	212
1977	1,996	232
1978	2,088	256
1979	1,920	248
1980	1,996	219
1981	1,623	239
1982	1,711	200
1983	1,580	161
1984	1,002	203
1985	331	183
1986	219	203
1987	237	229
1988	258	196
1989	257	161
1990	199	177
1991	233	210
1992	192	224

Table 44. Liquid and Gas Pipeline Fatalities, 1968-1992

Year	Fatalities	
	Gas	Liquid
1968	-	11
1969	-	5
1970	22	4
1971	45	2
1972	34	1
1973	35	7
1974	24	10
1975	14	7
1976	63	5
1977	36	3
1978	31	3
1979	45	4
1980	11	3
1981	16	5
1982	31	1
1983	12	6
1984	35	0
1985	26	5
1986	23	3
1987	9	3
1988	18	2
1989	36	3
1990	5	3
1991	14	0
1992	15	5

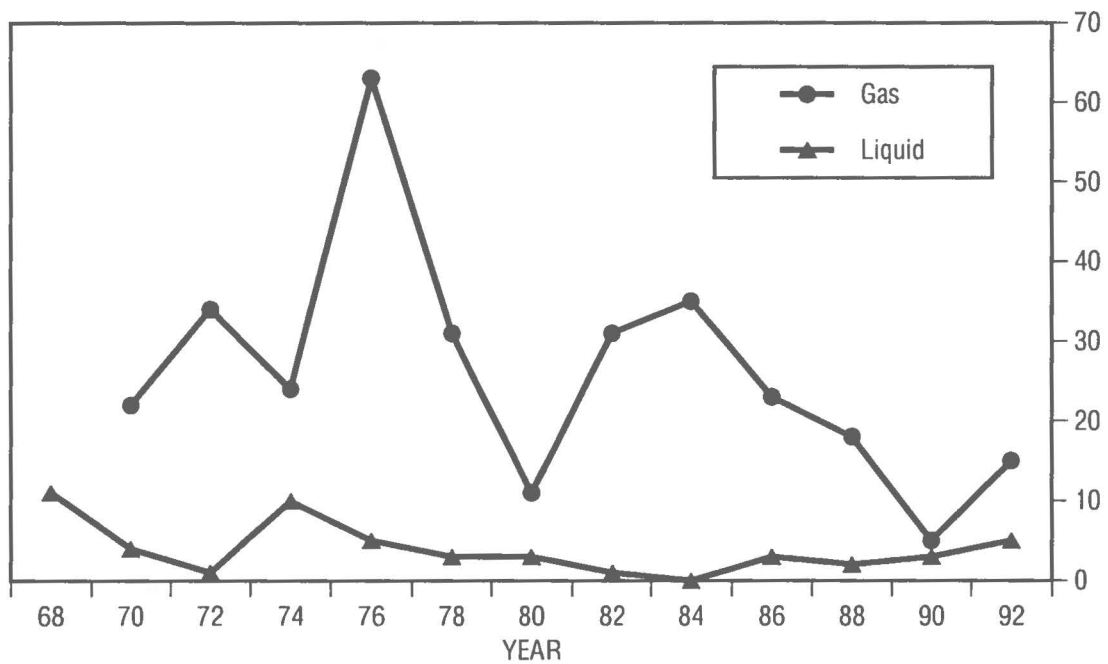
Note: Beginning with 1983 data, pipeline incidents are credited to the year in which they occurred, not the year in which the report was received.

Source: 1968-1991: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues, 1978-1991.
1992: *Ibid.*, U.S. DOT/RSPA, Office of Pipeline Safety, DPS-35.



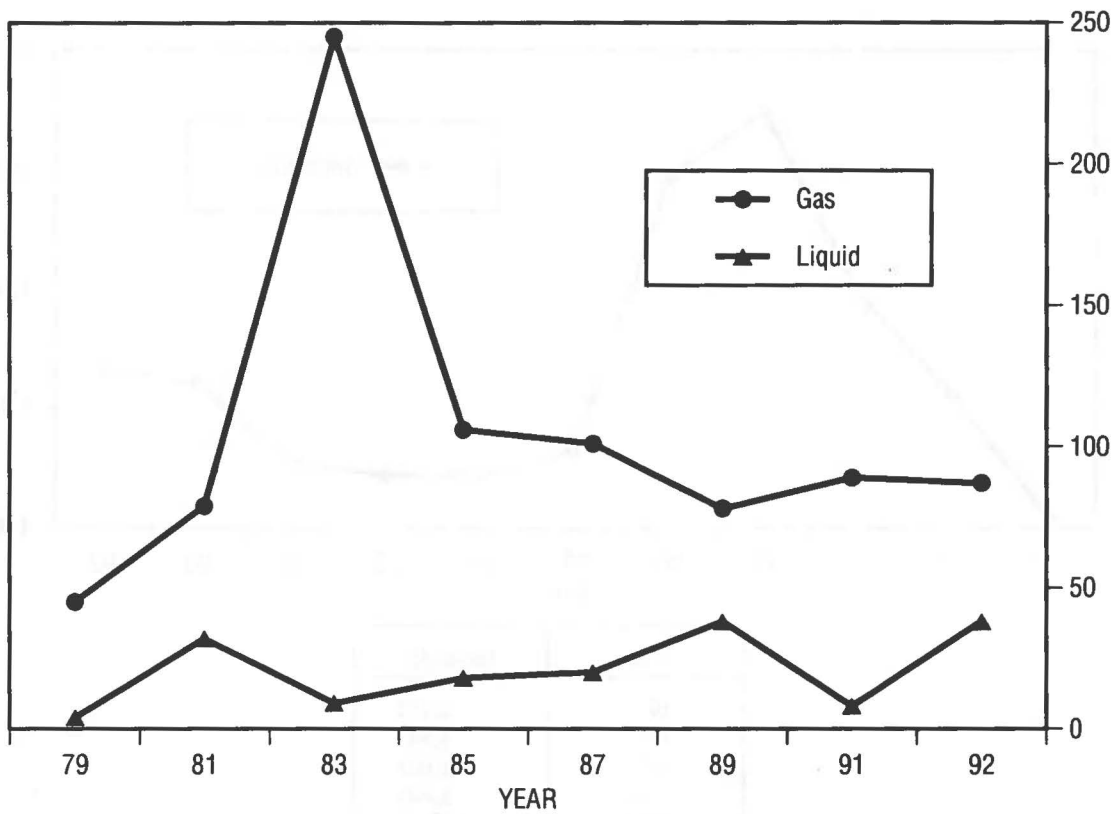
Source: See Table 43.

Figure 37. Liquid and Gas Pipeline Failures, 1968-1992



Source: See Table 44.

Figure 38. Liquid and Gas Pipeline Fatalities, 1968-1992

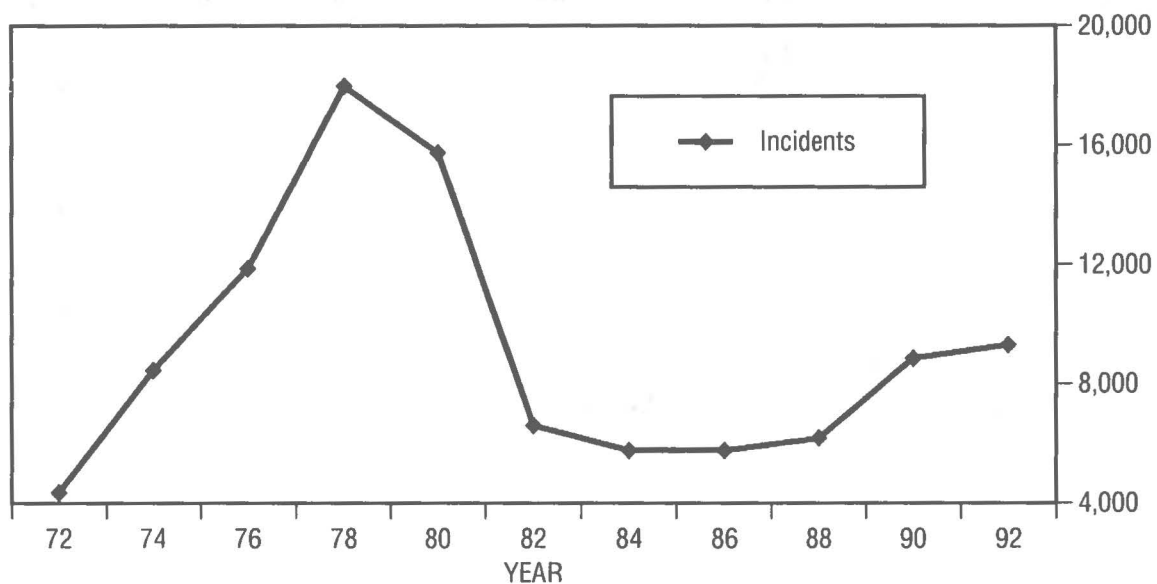


Year	Injuries	
	Gas	Liquid
1979	45	4
1980	11	3
1981	79	32
1982	266	6
1983	245	9
1984	229	19
1985	106	18
1986	106	32
1987	101	20
1988	87	19
1989	78	38
1990	67	7
1991	89	8
1992	87	38

Note: Beginning with 1983 data, pipeline incidents are credited to the year in which they occurred, not the year in which the report was received.

Source: U.S. DOT/RSPA, Office of Pipeline Safety, DPS-35.

Figure 39. Liquid and Gas Pipeline Injuries, 1979-1992

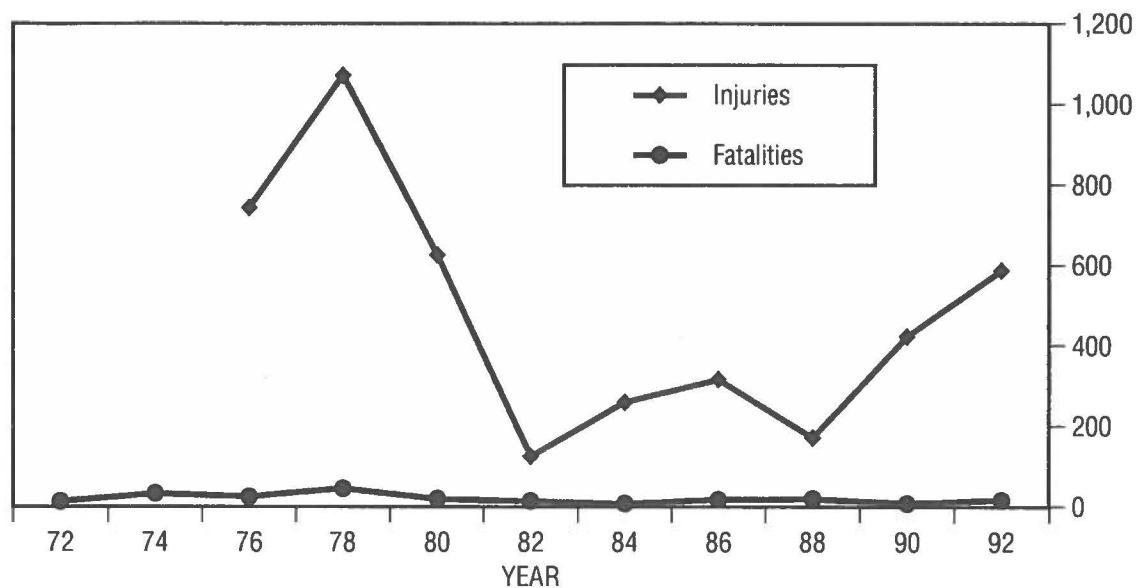


Year	Incidents
1971	2,256
1972	4,347
1973	6,021
1974	8,447
1975	10,951
1976	11,858
1977	15,954
1978	17,964
1979	17,663
1980	15,737
1981	10,010
1982	6,599
1983	5,815
1984	5,764
1985	6,019
1986	5,758
1987	6,137
1988	6,169
1989	7,558
1990	8,853
1991	9,093
1992	9,294

Note: Hazardous Materials operations initiated in 1971.

Source: 1971-1991: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
 1992: *Ibid.*, U.S. DOT/RSPA, Office of Hazardous Materials Transportation, DHM-63.

Figure 40. Hazardous Materials Incidents, 1971-1992



Year	Injuries	Fatalities
1971	-	23
1972	-	12
1973	-	21
1974	-	32
1975	648	27
1976	743	24
1977	818	26
1978	1,071	45
1979	930	17
1980	626	19
1981	640	25
1982	125	13
1983	189	8
1984	259	7
1985	253	8
1986	316	17
1987	331	10
1988	171	19
1989	330	8
1990	423	8
1991	438	10
1992	587	16

Note: Hazardous Materials operations initiated in 1971.

Source: 1971-1991: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
 1992: *Ibid.*, U.S. DOT/RSPA, Office of Hazardous Materials Transportation, DHM-63.

Figure 41. Hazardous Materials Fatalities and Injuries, 1971-1992

TRANSPORTATION TRENDS

Section III: Motor Vehicle Sales, Production, and Costs

This section includes data for 1960-1992 depicting the number of motor vehicles produced and sold in the U.S. and worldwide. Cost of owning and operating automobiles, vans, and light trucks for 1991 are also shown.

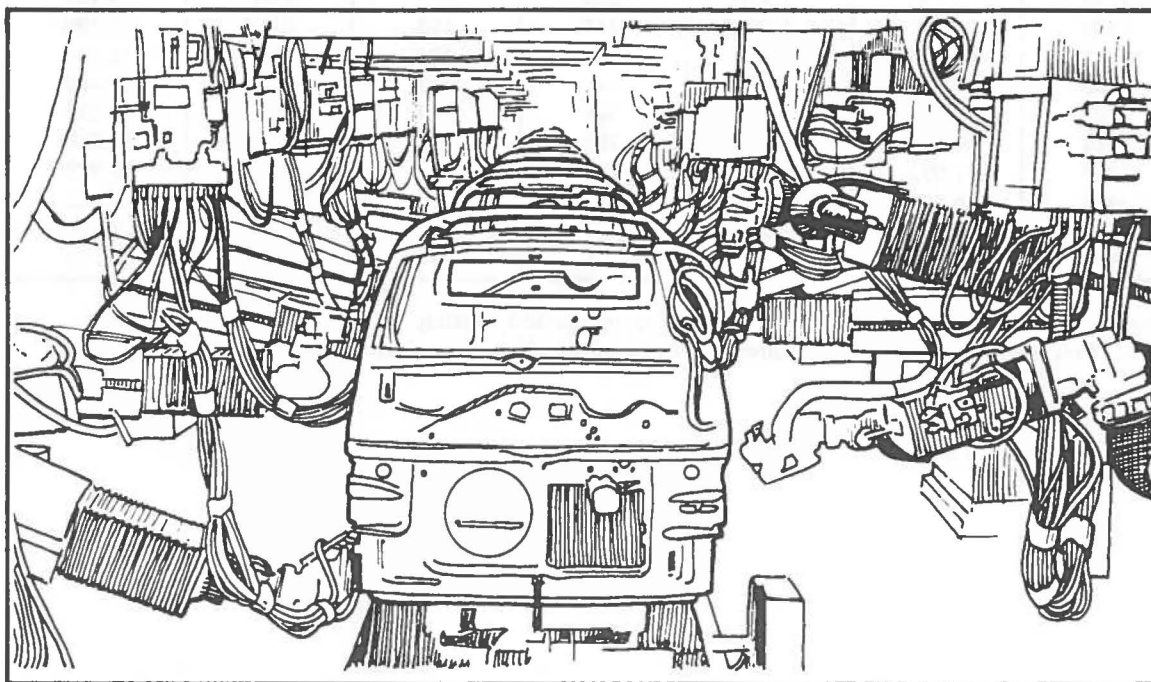


Table 45. U.S. Retail Passenger Car Sales, 1970-1992
(thousands)

Year	Domestic	Imports				Total Passenger Car Sales
		Japan	Germany	Other	Total	
1970	7,119	313	750	217	1,280	8,400
1971	8,681	579	769	212	1,561	10,242
1972	9,327	629	770	215	1,614	10,940
1973	9,676	743	788	218	1,748	11,424
1974	7,454	592	595	212	1,399	8,853
1975	7,053	808	493	271	1,571	8,624
1976	8,611	942	371	186	1,499	10,110
1977	9,109	1,388	460	227	2,074	11,183
1978	9,312	1,357	436	209	2,002	11,314
1979	8,341	1,756	366	210	2,332	10,673
1980	6,581	1,906	305	187	2,398	8,979
1981	6,209	1,859	283	186	2,327	8,536
1982	5,759	1,802	247	175	2,224	7,982
1983	6,795	1,916	280	191	2,387	9,182
1984	7,952	1,906	344	188	2,439	10,390
1985	8,205	2,218	424	196	2,838	11,042
1986	8,215	2,383	444	418	3,245	11,460
1987	7,081	2,190	348	657	3,196	10,277
1988	7,526	2,023	280	701	3,004	10,530
1989	7,073	1,897	249	554	2,699	9,772
1990	6,897	1,719	265	419	2,403	9,300
1991	6,137	1,500	193	345	2,038	8,175
1992	6,277	1,453	201	284	1,938	8,214

Note: Sum of components may not equal total due to independent rounding.

Source: American Automobile Manufacturers Association of the U.S., Inc., *Facts & Figures*, 1993, p. 16.

Table 46. Annual U.S. Motor Vehicle Production and Factory Sales, 1960-1992
(thousands)

Year	Production			Factory Sales		
	Passenger Cars	Motor Trucks and Buses	Total Vehicles	Passenger Cars	Motor Trucks and Buses	Total Vehicles
1960	6,703	1,202	7,905	6,675	1,194	7,869
1961	5,522	1,130	6,653	5,543	1,134	6,677
1962	6,943	1,254	8,197	6,933	1,240	8,173
1963	7,644	1,464	9,109	7,638	1,463	9,100
1964	7,745	1,562	9,308	7,752	1,540	9,292
1965	9,335	1,803	11,138	9,306	1,752	11,057
1966	8,605	1,792	10,396	8,598	1,731	10,329
1967	7,413	1,611	9,024	7,437	1,539	8,976
1968	8,848	1,972	10,820	8,822	1,896	10,718
1969	8,224	1,982	10,206	8,224	1,923	10,147
1970	6,550	1,734	8,284	6,547	1,692	8,239
1971	8,584	2,088	10,672	8,585	2,053	10,638
1972	8,828	2,483	11,311	8,824	2,447	11,271
1973	9,667	3,014	12,682	9,658	2,980	12,637
1974	7,324	2,747	10,071	7,331	2,727	10,059
1975	6,716	2,270	8,987	6,713	2,272	8,985
1976	8,498	3,000	11,498	8,500	2,979	11,480
1977	9,214	3,489	12,703	9,201	3,442	12,642
1978	9,177	3,723	12,899	9,165	3,706	12,871
1979	8,434	3,046	11,480	8,419	3,037	11,456
1980	6,376	1,634	8,010	6,400	1,667	8,067
1981	6,253	1,690	7,943	6,255	1,701	7,956
1982	5,073	1,912	6,986	5,049	1,906	6,956
1983	6,781	2,444	9,225	6,739	2,434	9,173
1984	7,773	3,151	10,925	7,621	3,176	10,797
1985	8,185	3,468	11,653	8,002	3,464	11,467
1986	7,829	3,506	11,335	7,516	3,501	11,017
1987	7,099	3,826	10,925	7,085	3,821	10,907
1988	7,113	4,101	11,214	7,105	4,121	11,225
1989	6,823	4,051	10,874	6,807	4,062	10,869
1990	6,077	3,706	9,783	6,050	3,719	9,769
1991	5,439	3,372	8,811	5,407	3,375	8,783
1992	5,666	4,038	9,704	5,684	4,042	9,727

Note: Sum of components may not equal total due to independent rounding. Factory sales in 1980 and 1981 were greater than production total because of sales from previous year's inventory.

Source: American Automobile Manufacturers Association of the U.S., Inc., *Facts & Figures*, 1993, p. 3.

**Table 47. U.S. Retail Sales of New Cars by Sector
(at 5-year Intervals 1960-1970 and annually 1973-1992)**

Year	Units by Consuming Sector (000)				% of Total Sales	
	Consumer	Business	Government	Total	Consumer	Business
1960	4,950	1,616	66	6,632	74.6	24.4
1965	7,106	2,149	89	9,344	76.0	23.0
1970	6,252	2,056	94	8,403	74.4	24.5
1973	8,423	2,811	116	11,350	74.2	24.8
1974	6,084	2,565	126	8,774	69.3	29.2
1975	5,907	2,508	123	8,538	69.2	29.4
1976	7,036	2,822	137	9,994	70.4	28.2
1977	7,657	3,220	169	11,046	69.3	29.2
1978	7,548	3,456	161	11,164	67.6	31.0
1979	7,132	3,285	142	10,559	67.5	31.1
1980	6,062	2,791	126	8,979	67.5	31.1
1981	5,623	2,787	116	8,535	66.0	32.7
1982	5,285	2,593	102	7,980	66.2	32.5
1983	6,054	3,006	119	9,179	66.0	32.7
1984	6,590	3,669	135	10,394	63.4	35.3
1985	7,083	3,822	134	11,039	64.2	34.6
1986	7,658	3,666	127	11,450	66.9	32.0
1987	6,748	3,395	135	10,278	65.7	33.0
1988	6,802	3,699	138	10,639	63.9	34.8
1989	6,375	3,402	136	9,913	64.3	34.3
1990	5,708	3,567	149	9,484	60.8	37.6
1991	4,534	3,758	97	8,389	54.1	44.8
1992	4,569	3,679	104	8,352	54.7	44.0

Source: American Automobile Manufacturers Association of the U.S., Inc., *Facts and Figures*, 1993, p. 16.

Table 48. Model Year Sales, Market Shares, and Sales-Weighted Fuel Economies of Domestic and Import Automobiles, Model Years 1976-1992^a

	1976	1978	1980	1982	1984	1986	1988	1990	1991	1992 ^p
MINICOMPACT										
Total sales, units	-	296,702	428,346	221,699	41,368	191,490	84,186	76,698	73,562	46,013
Market share, %	-	3.3	4.7	2.9	0.4	1.7	0.8	0.8	0.9	1.2
Fuel economy, mpg	-	33.3	29.4	36.5	29.0	31.9	37.8	26.4	28.0	31.3
SUBCOMPACT										
Total sales, units	2,625,929	2,927,574	3,441,480	2,404,489	2,510,929	2,350,031	1,983,353	2,030,226	2,172,496	973,731
Market share, %	27.1	33.0	37.8	31.4	24.6	21.2	19.1	22.0	26.1	26.2
Fuel economy, mpg	23.5	29.3	27.3	30.2	30.5	30.7	31.7	31.3	31.5	31.4
COMPACT										
Total sales, units	2,839,603	1,191,194	599,523	1,300,372	2,768,056	3,829,093	4,199,638	3,156,481	2,458,967	1,152,445
Market share, %	29.3	13.4	6.6	17.0	27.1	34.5	43.5	34.2	29.5	31.0
Fuel economy, mpg	17.1	27.8	22.3	30.1	30.6	30.0	29.8	28.9	28.7	28.6
MIDSIZE										
Total sales, units	1,815,505	3,113,806	3,073,103	2,533,121	3,059,647	2,985,835	2,550,964	2,511,503	2,333,104	975,169
Market share, %	18.7	35.1	33.8	33.1	30.0	26.9	24.6	27.2	28.0	26.2
Fuel economy, mpg	15.3	22.9	21.3	24.1	24.1	25.6	26.9	25.9	25.8	25.4
LARGE										
Total sales, units	2,206,102	1,107,627	1,336,190	995,561	1,502,097	1,467,077	1,368,713	1,279,092	1,161,679	527,175
Market share, %	22.9	12.5	14.7	13.0	14.7	13.2	13.2	13.9	13.9	14.2
Fuel economy, mpg	13.9	20.6	19.3	20.6	20.2	23.8	24.2	23.5	23.4	23.9
TWO SEATER										
Total sales, units	199,716	242,961	215,964	202,929	328,968	275,470	186,127	170,465	139,296	48,205
Market share, %	2.1	2.7	2.4	2.6	3.2	2.5	1.8	1.8	1.7	1.6
Fuel economy, mpg	20.1	24.1	21.0	25.1	26.5	28.4	27.3	28.0	27.4	26.5
FLEET										
Total sales, units	9,686,855	8,879,864	9,094,506	7,658,171	10,211,065	11,099,046	10,372,985	9,224,465	8,339,104	3,722,738
Market share, %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuel economy, mpg	17.2	25.3	23.2	26.3	26.3	27.9	28.5	27.6	27.6	27.6

^a These figures represent only those sales that could be matched to corresponding EPA fuel economy values.

^p preliminary. Represents sales for the first six months of model year 1992 (October through March).

Source: Oak Ridge National Laboratory, *Light-Duty Vehicle Summary: First Six Months of Model Year 1992*, Table 6, and similar table in earlier editions.

Table 49. Model Year Sales, Market Shares, and Sales-Weighted Fuel Economies of Domestic and Import Light Trucks, Model Years 1976-1992^a

	1976	1978	1980	1982	1984	1986	1988	1990	1991	1992 ^p
SMALL PICKUP										
Total sales, units	170,351	308,790	516,412	579,263	1,012,298	1,225,570	1,026,551	678,488	609,814	267,578
Market share, %	7.1	10.5	23.3	27.2	28.0	27.0	21.6	15.0	14.9	13.6
Fuel economy, mpg	23.9	26.9	25.5	28.1	27.2	26.1	26.1	25.2	25.6	25.2
LARGE PICKUP										
Total sales, units	1,586,020	1,886,782	1,115,248	1,000,772	1,218,972	1,325,547	1,453,255	1,573,729	1,364,940	651,670
Market share, %	66.4	64.0	50.3	46.9	33.7	29.2	30.6	34.9	33.4	33.0
Fuel economy, mpg	15.1	16.6	17.0	18.6	17.5	18.4	18.6	18.9	18.9	18.8
SMALL VAN										
Total sales, units	18,651	24,755	13,649	11,964	222,798	640,936	851,384	932,693	886,841	458,304
Market share, %	0.8	0.8	0.6	0.6	6.2	14.1	18.0	20.7	21.7	23.2
Fuel economy, mpg	19.5	19.5	19.6	22.5	25.0	23.8	22.9	23.1	22.6	22.2
LARGE VAN										
Total sales, units	574,745	670,453	328,065	379,110	545,595	510,558	486,981	398,877	308,317	148,166
Market share, %	24.1	22.8	14.8	17.8	15.1	11.3	10.3	8.8	7.5	7.5
Fuel economy, mpg	15.4	16.4	16.3	17.0	16.3	17.3	17.0	16.9	17.1	16.8
SMALL UTILITY										
Total sales, units	4,716	10,731	79,776	31,226	398,000	598,652	701,005	738,294	782,125	394,008
Market share, %	0.2	0.4	3.6	1.5	11.0	13.2	14.8	16.4	19.2	20.0
Fuel economy, mpg	15.5	15.9	16.7	20.0	23.0	21.5	22.3	21.9	21.4	20.9
LARGE UTILITY										
Total sales, units	32,427	44,948	163,387	130,505	215,271	233,625	223,824	192,544	131,740	54,230
Market share, %	1.4	1.5	7.4	6.1	6.0	5.2	4.7	4.3	3.2	2.7
Fuel economy, mpg	14.7	15.4	14.6	17.0	15.7	15.9	16.2	16.1	16.4	16.6
FLEET										
Total sales, units	2,386,910	2,946,459	2,216,537	2,132,840	3,612,934	4,534,888	4,743,000	4,514,625	4,083,777	1,973,956
Market share, %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuel economy, mpg	15.6	17.2	18.1	20.0	20.0	20.8	20.7	20.5	20.6	20.4

^a These figures represent only those sales that could be matched to corresponding EPA fuel economy values.

^p preliminary. Represents sales for the first six months of model year 1992 (October through March).

Source: Oak Ridge National Laboratory, *Light-Duty Vehicle Summary: First Six Months of Model Year 1992*, Table 11, and similar table in earlier editions.

Table 50. World Motor Vehicle Production, 1961-1991
(thousands)

Country	Passenger Cars				Trucks and Buses				Total			
	1961	1971	1981	1991	1961	1971	1981	1991	1961	1971	1981	1991
Argentina	78	193	139	114	58	60	33	25	136	253	172	139
Australia	182	393	352	278	49	77	40	15	231	470	392	293
Austria	8	1	7	14	5	6	8	6	13	7	15	19
Belgium	-	279	216	253	1	17	41	84	1	296	257	338
Brazil	98	342	406	705	47	174	374	255	145	516	780	960
Canada	328	1,083	203	1,072	63	277	520	833	391	1,360	1,323	1,905
China	-	-	-	40	-	-	-	604	-	-	-	644
Czechoslovakia	59	149	181	173	17	28	49	29	76	177	230	201
France	988	2,694	2,612	3,188	217	316	408	423	1,205	3,010	3,019	3,611
Germany	1,802	3,829*	3,758*	4,809	411	312	358	391	2,213	4,141	4,116	5,200
Hungary	-	-	0	0	6	10	14	5	6	10	14	5
India	22	42	42	177	32	47	107	177	54	89	149	354
Italy	694	1,701	1,257	1,631	65	116	176	245	759	1,817	1,434	1,877
Japan	250	3,718	6,974	9,753	789	2,093	4,206	3,492	1,039	5,811	11,180	13,245
Korea	-	-	69	1,158	-	-	65	340	-	-	134	1,498
Mexico	-	154	355	720	-	57	242	269	-	211	597	989
Netherlands	13	78	78	85	6	13	12	26	19	91	90	111
Poland	14	86	248	155	22	60	60	30	36	146	308	185
Spain	55	453	855	1,774	20	79	132	308	75	532	987	2,082
Sweden	110	287	258	269	22	30	55	75	132	317	314	345
United Kingdom	1,004	1,742	955	1,237	443	456	230	217	1,447	2,198	1,184	1,454
United States	5,522	8,584	6,253	5,439	1,131	2,088	1,690	3,372	6,653	10,672	7,943	8,811
U.S.S.R.	149	518	1,324	1,170	406	612	874	759	555	1,130	2,198	1,929
Yugoslavia	15	114	240	216	5	18	27	26	20	132	266	242
Total	11,391	26,440	26,782	34,431	3,815	6,946	9,721	15,206	9,356	33,175	37,230	46,437

* Includes 407,226 micro-buses in 1971 and 296,572 micro-buses in 1981.

Note: Production in this table refers to vehicles locally manufactured.

Source: American Automobile Manufacturers Association of the U.S., Inc., *Facts & Figures*, 1992, p. 11, and similar table in earlier editions.

Table 51. Cost of Owning and Operating Automobiles, Vans, and Light Trucks, 1991
(cents per mile)

Suburban Based Operation

Vehicle Size	Depreciation	Insurance	Maintenance	Parking & Tolls	Tires	Finance Charges	License, Registration and Taxes	Fuel & Oil Excluding Taxes	Fuel & Oil Taxes	Total Cost ¹
Subcompact	8.6	7.1	4.0	1.3	0.7	1.6	0.8	3.5	1.3	28.9
Compact	8.7	7.0	3.9	1.3	0.9	1.6	0.7	4.0	1.4	29.5
Intermediate	10.7	7.0	4.2	1.3	1.0	2.0	0.9	4.6	1.7	33.4
Full-Size	13.5	7.2	4.5	1.3	1.0	2.5	1.1	5.0	1.8	37.9
Compact Pick-Up	8.7	7.2	4.0	1.3	1.0	1.8	0.9	4.2	1.5	30.6
Full-Size Pick-Up	9.5	7.2	4.3	1.3	1.0	2.2	0.9	6.2	2.3	35.1
Minivan	11.8	7.0	4.0	1.3	1.1	2.2	0.9	5.1	1.9	35.3
Full-Size Van	14.2	8.5	4.2	1.3	1.4	2.9	1.2	8.1	3.0	44.8

¹ Total costs over twelve years.

Source: U.S. DOT/FHWA, *Cost of Owning and Operating Automobiles, Vans, and Light Trucks*, 1991.

SUPPLEMENTARY DATA

Section I: Transportation and the Economy

Transportation and the Economy is the first of the three supplementary sections. Tabular and graphic statistics are used to show transportation's interrelationship with the economy from 1960-1991/1992.

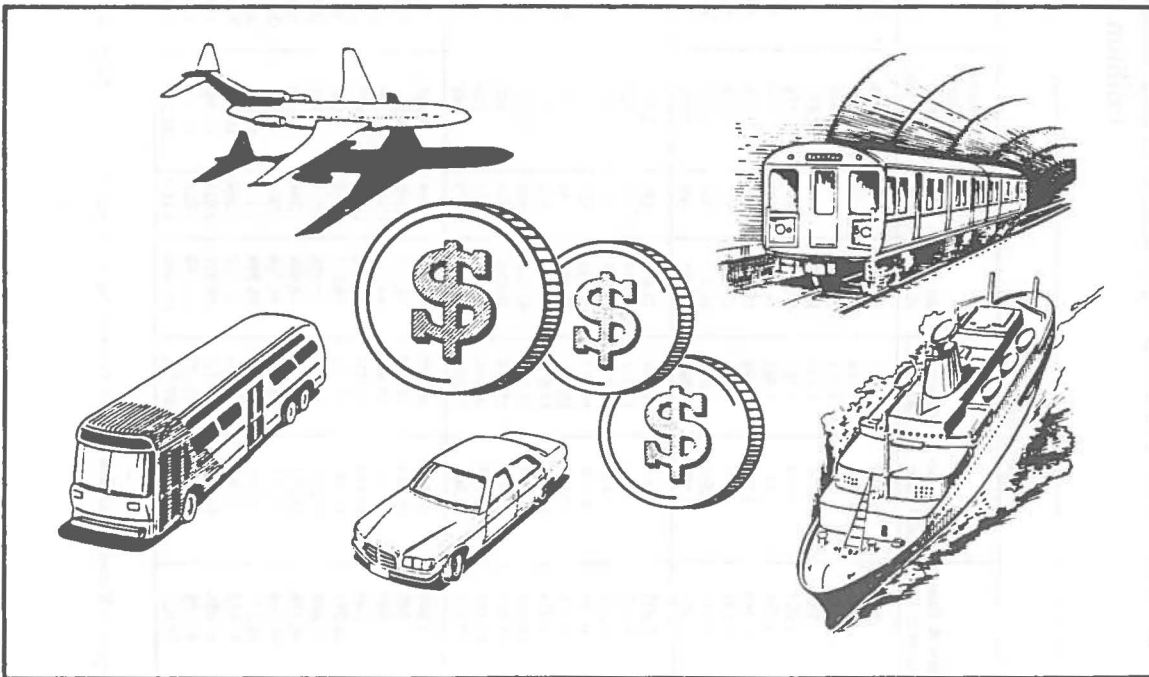
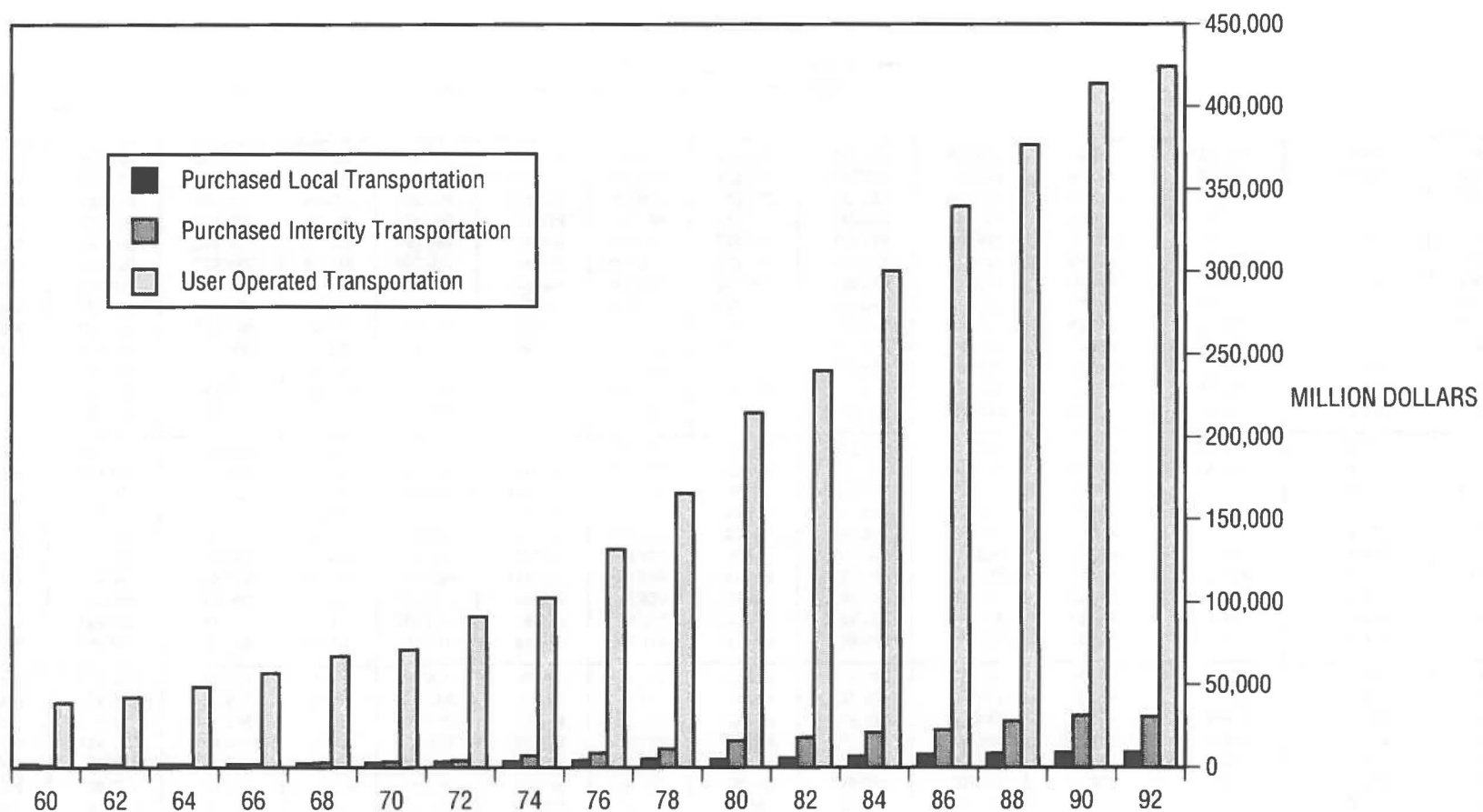


Table 52. Personal Consumption Expenditures by Transportation Sector, 1960-1992
(million dollars)

Year	User-Operated Transportation								Purchased Intercity Transportation					Purchased Local Transportation			Total Transportation
	New Cars and Net Purchases of Used Cars	New & Used Trucks & RVs	Tires, Tubes, Accessories and Parts	Repair & Rental	Gasoline & Oil	Tolls	Insurance Premiums Less Claims Paid	Total	Railroad	Intercity Bus	Airline	Other	Total	Mass Transit System	Taxi	Total	
1960	16,585	606	2,485	5,065	11,977	310	2,029	39,057	306	290	676	35	1,307	1,295	609	1,904	42,268
1961	14,753	516	2,567	5,360	11,981	330	2,133	37,640	291	288	760	39	1,378	1,295	570	1,865	40,883
1962	17,972	733	2,823	5,701	12,567	356	2,140	42,292	284	298	882	44	1,508	1,317	588	1,905	45,705
1963	20,535	889	3,010	6,100	12,920	379	2,130	45,963	264	290	924	44	1,522	1,315	595	1,910	49,395
1964	21,808	1,025	3,233	6,492	13,530	421	2,116	48,625	280	335	1,044	48	1,707	1,313	595	1,908	52,240
1965	25,294	1,284	3,444	6,901	14,696	463	2,379	54,461	284	375	1,191	54	1,904	1,313	612	1,925	58,290
1966	25,096	1,540	3,756	7,393	15,962	495	2,839	57,081	297	429	1,329	73	2,128	1,343	638	1,981	61,190
1967	24,491	1,637	3,989	8,004	17,014	517	3,028	58,680	270	466	1,582	107	2,425	1,399	692	2,091	63,196
1968	29,300	2,410	4,598	8,836	18,635	566	3,035	67,380	239	486	1,892	128	2,745	1,430	856	2,286	72,411
1969	30,289	2,977	5,384	9,892	20,731	609	3,038	72,920	228	492	2,337	157	3,214	1,533	1,013	2,443	78,577
1970	27,265	2,883	6,065	11,232	22,419	652	3,752	71,385	214	532	2,450	182	3,378	1,636	1,180	2,816	80,462
1971	34,096	4,195	7,108	12,653	23,888	702	4,864	83,311	184	575	2,694	202	3,655	1,681	1,403	3,084	90,050
1972	38,239	6,202	7,970	13,779	25,432	763	5,407	91,590	214	585	3,108	243	4,150	1,690	1,573	3,263	99,363
1973	41,243	6,296	8,939	14,657	28,635	803	5,240	99,427	241	610	3,533	289	4,673	1,724	1,556	3,280	107,380
1974	34,410	6,396	9,507	16,961	36,130	784	4,984	102,776	288	732	5,528	356	6,904	1,822	1,687	3,509	113,189
1975	37,790	7,739	10,287	19,803	39,703	821	3,776	112,180	267	737	5,878	387	7,269	1,865	1,968	3,833	123,282
1976	49,281	12,060	11,367	22,134	43,046	866	5,270	131,964	281	761	7,120	468	8,630	2,015	2,208	4,223	144,817
1977	56,648	15,855	12,877	25,729	46,934	908	7,820	150,916	272	821	8,286	563	9,942	2,130	2,397	4,527	165,385
1978	62,225	19,150	13,706	28,016	51,301	955	7,820	165,543	261	847	9,331	639	11,078	2,243	2,617	4,860	181,481
1979	64,056	17,579	15,261	31,107	66,094	975	8,447	185,940	317	1,003	10,857	790	12,967	2,406	2,880	5,286	204,193
1980	57,243	11,849	14,889	33,682	86,689	1,104	9,443	214,879	300	1,403	13,454	910	16,067	2,927	1,866	4,793	235,739
1981	63,446	12,805	15,382	36,730	97,919	1,199	8,936	236,417	333	1,604	14,561	1,019	17,517	3,322	1,689	5,011	258,995
1982	66,887	15,802	15,230	37,903	94,125	1,306	9,150	240,203	317	1,665	14,706	1,173	17,861	3,839	1,513	5,352	263,416
1983	82,115	21,909	16,589	42,529	93,300	1,282	10,412	268,136	378	1,616	15,482	1,294	18,730	4,037	1,829	5,966	292,832
1984	98,712	28,589	17,302	49,723	94,532	1,387	10,089	300,344	415	1,632	17,721	1,360	21,128	4,244	2,498	6,742	328,214
1985	111,689	37,608	18,059	57,714	96,936	1,519	10,011	333,536	449	1,612	18,664	1,643	22,368	4,435	2,926	7,361	363,265
1986	125,688	40,818	18,353	60,695	79,699	1,794	12,724	339,771	472	1,469	18,993	1,737	22,671	4,913	2,998	7,911	370,354
1987	121,634	43,014	18,817	65,707	84,714	2,004	15,542	351,432	509	1,880	21,027	1,907	25,323	5,063	2,955	8,018	384,773
1988	131,573	45,577	20,685	73,531	86,899	1,774	16,842	376,881	588	2,181	22,993	2,229	27,991	5,377	2,935	8,312	413,184
1989	132,399	51,652	21,365	79,132	96,223	2,059	16,803	399,633	671	1,708	24,728	2,387	29,494	5,301	2,841	8,142	437,269
1990	130,359	49,586	22,483	82,538	108,471	2,024	18,066	413,527	708	1,396	26,467	2,644	31,215	5,707	3,209	8,916	453,658
1991	115,282	47,155	23,006	83,678	105,459	2,021	21,826	398,427	722	1,521	25,842	2,651	30,736	5,707	3,358	9,065	438,228
1992 ^P	123,838	55,923	23,948	87,511	105,446	2,115	25,200	423,981	699	1,378	25,867	2,672	30,616	5,696	3,394	9,090	463,687

^P preliminary.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July issues, Table 2.4.



Source: See Table 37.

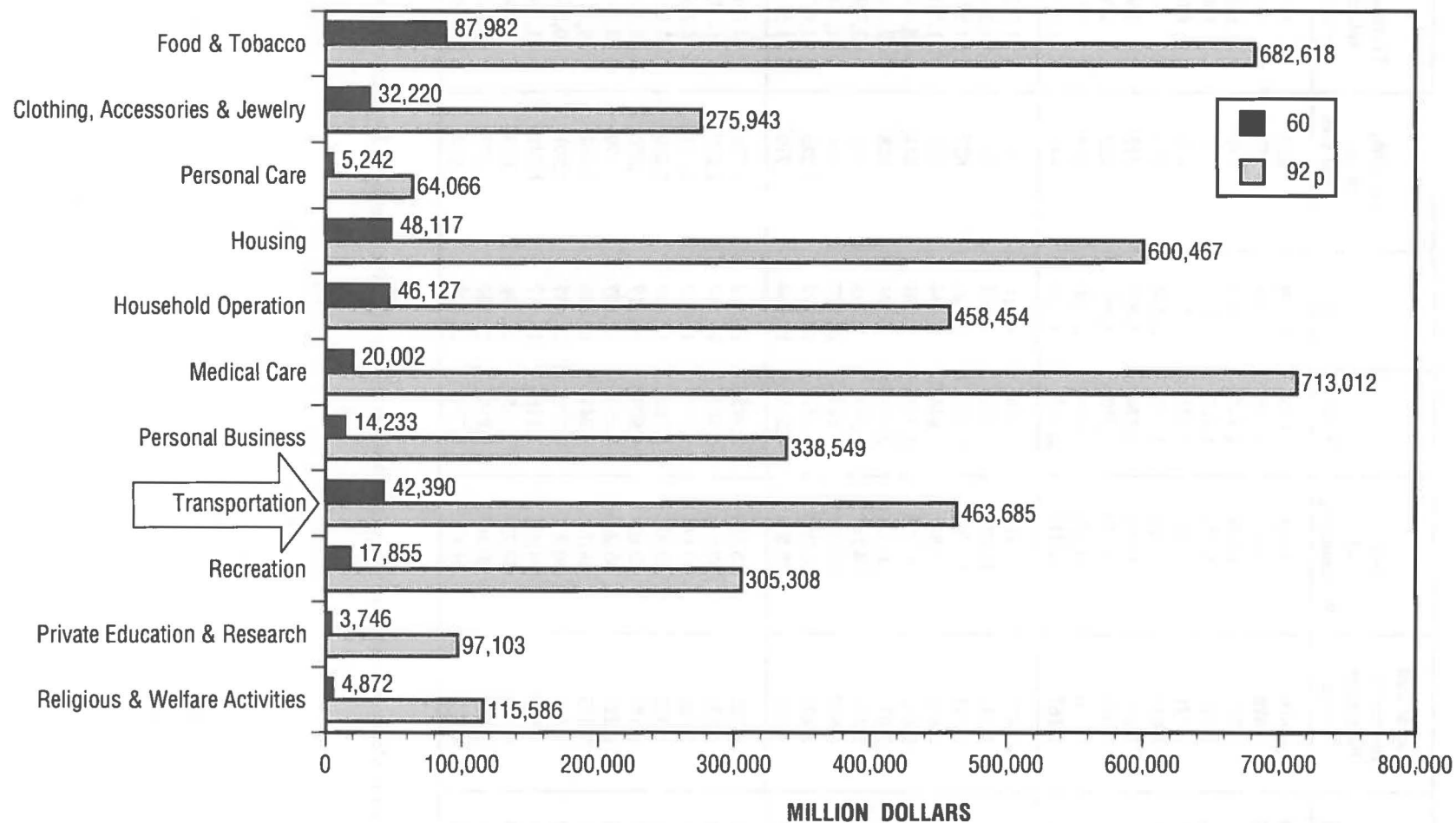
Figure 42. Personal Consumption Expenditures by Transportation Sector, 1960-1992

Table 53. Personal Consumption Expenditures by Type, 1960-1992
(million dollars)

Year	Food & Tobacco	Clothing, Accessories & Jewelry	Personal Care	Housing	Household Operation	Medical Care	Personal Business	Transportation	Recreation	Private Education & Research	Religious & Welfare Activities	Foreign Travel by U.S. Residents	Total
1960	87,982	32,220	5,242	48,117	46,127	20,002	14,233	42,390	17,855	3,746	4,872	2,121	324,907
1961	90,373	32,904	5,783	51,160	47,624	21,328	15,175	41,010	18,573	4,000	5,020	2,047	334,997
1962	92,684	34,416	6,351	54,726	50,376	23,383	15,600	45,832	20,042	4,317	5,150	2,342	355,219
1963	95,332	35,402	6,657	57,971	53,398	25,174	16,896	49,525	21,654	4,661	5,394	2,517	374,581
1964	100,273	38,276	7,106	61,394	57,678	28,183	18,049	52,374	23,698	5,073	5,825	2,568	400,497
1965	106,968	40,305	7,617	65,469	61,322	30,053	19,714	58,426	25,907	5,684	6,055	2,858	430,378
1966	115,111	44,091	8,455	69,522	66,468	32,554	21,870	61,330	29,794	6,447	6,344	3,132	465,118
1967	118,531	46,149	9,082	74,144	70,164	35,091	23,999	63,341	31,943	7,109	6,921	3,788	490,262
1968	128,097	50,681	9,861	79,788	75,557	38,872	26,734	72,564	35,364	8,043	7,638	3,684	536,883
1969	137,290	54,361	10,316	86,972	80,386	44,858	29,309	78,842	38,041	8,980	8,022	4,044	581,781
1970	149,662	55,780	11,016	93,910	84,079	50,415	31,635	80,634	41,322	9,877	8,877	4,514	621,721
1971	158,840	61,752	12,072	102,685	89,999	66,974	35,218	94,784	45,995	13,715	13,514	4,778	700,326
1972	170,709	67,008	12,852	112,069	99,346	74,924	38,532	105,326	51,441	15,072	15,209	5,237	767,805
1973	189,343	74,670	14,128	122,724	111,229	83,608	41,638	115,440	57,676	16,637	16,332	4,721	848,146
1974	212,208	79,285	15,430	134,121	123,270	93,680	46,152	119,000	63,579	18,315	17,953	4,708	927,701
1975	233,596	85,619	16,731	147,035	135,376	107,867	52,961	130,213	70,902	20,466	19,688	4,445	1,024,898
1976	252,796	93,654	18,202	161,472	151,942	122,335	59,699	155,653	78,771	22,421	22,332	3,790	1,143,066
1977	272,924	102,779	20,740	179,509	170,562	139,836	66,082	179,613	86,382	24,014	24,780	4,311	1,271,531
1978	298,863	114,979	23,026	201,674	189,848	159,562	79,950	195,922	96,975	26,684	29,469	4,249	1,421,201
1979	332,143	123,102	25,105	226,551	212,312	180,797	89,488	217,108	109,707	29,787	33,530	4,076	1,583,706
1980	362,638	131,792	26,913	255,200	233,611	207,231	101,641	235,739	214,879	33,616	38,557	3,540	1,748,077
1981	390,164	143,208	28,720	287,074	255,194	242,852	108,498	258,945	130,502	37,879	43,583	(394)	1,926,235
1982	410,310	146,227	29,696	311,135	273,014	272,771	122,107	263,416	139,970	41,743	47,855	935	2,059,179
1983	434,506	159,600	33,858	334,587	296,046	302,174	146,859	292,832	155,189	45,808	52,480	3,637	2,257,546
1984	460,308	174,100	36,851	362,301	322,317	331,711	158,531	328,214	172,844	49,763	58,764	4,584	2,460,288
1985	482,818	185,903	39,948	392,498	342,265	364,698	184,912	363,265	187,899	54,470	63,349	5,381	2,667,396
1986	509,874	201,144	43,368	421,799	358,028	396,701	214,474	370,349	203,823	58,988	70,346	1,659	2,850,553
1987	535,762	215,482	47,397	452,543	374,822	440,373	233,998	384,773	223,661	64,076	75,963	3,374	3,052,223
1988	569,772	231,773	51,448	484,184	398,857	487,745	255,035	413,184	246,801	71,618	86,023	(314)	3,296,126
1989	605,633	248,663	55,768	514,361	422,614	536,390	272,247	437,269	266,032	79,415	92,656	(7,979)	3,523,070
1990	644,714	258,586	59,513	547,534	434,727	595,871	297,363	453,654	280,670	86,470	102,079	(12,704)	3,748,417
1991	665,441	260,581	62,180	574,010	441,677	656,021	317,728	438,228	289,657	92,760	107,707	(18,301)	3,887,689
1992 ^P	682,618	275,943	64,066	600,467	458,454	713,012	338,549	463,685	305,308	97,103	115,586	(18,968)	4,095,823

^P preliminary.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July issues, Tables 2 and 2.4.



p preliminary.
Source: See Table 53.

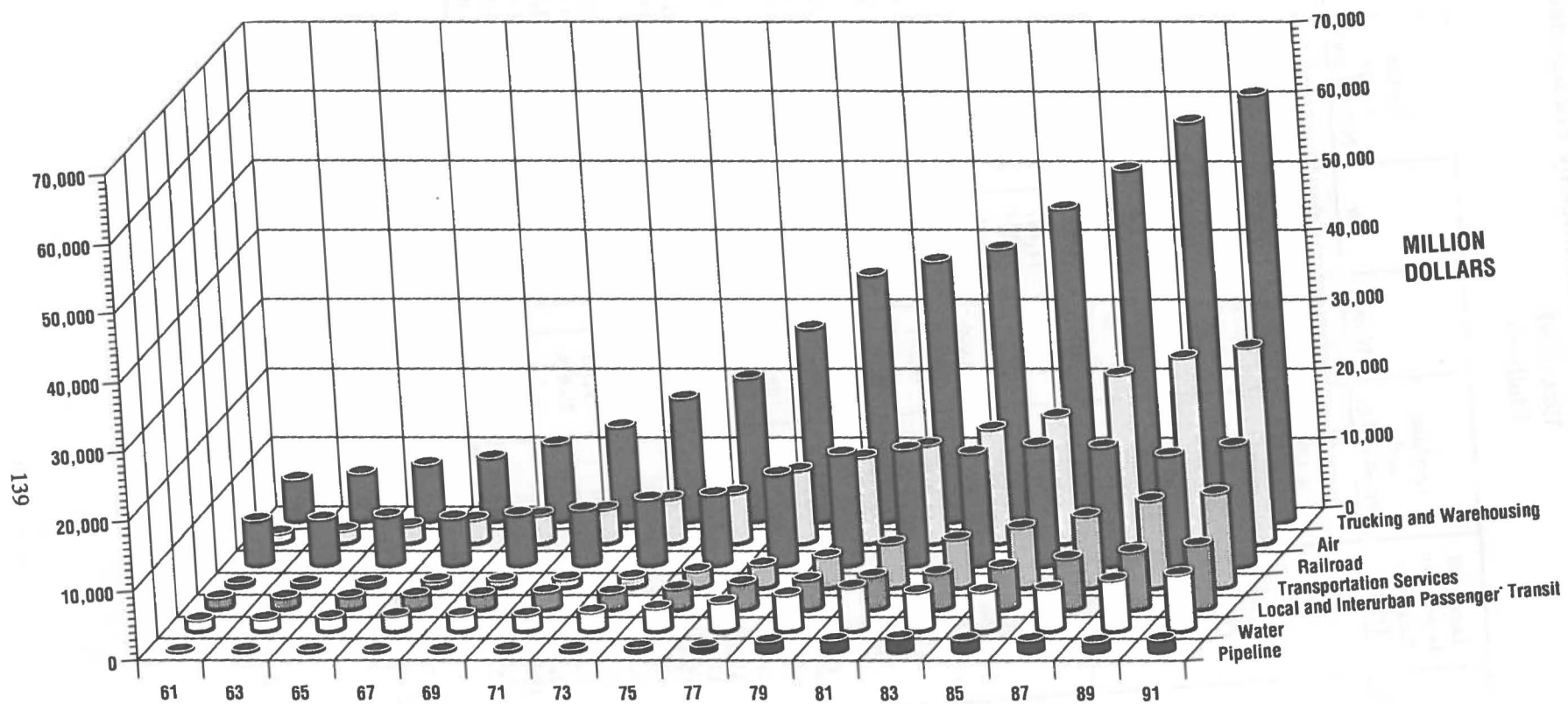
Figure 43. Personal Consumption Expenditures by Type, 1960 and 1992

Table 54. National Income by Transportation Sector, 1960-1991
(million dollars)

Year	Railroad	Local and Interurban Passenger Transit	Trucking and Warehousing	Water	Air	Pipeline, except Natural Gas	Transportation Services
1960	6,710	1,619	5,886	1,635	1,370	350	571
1961	6,475	1,678	6,051	1,655	1,443	357	593
1962	6,438	1,703	6,588	1,724	1,664	340	603
1963	6,634	1,716	6,913	1,815	1,881	426	640
1964	6,795	1,771	7,463	2,001	2,229	429	684
1965	7,084	1,857	8,185	2,018	2,574	454	754
1966	7,327	1,951	8,998	2,274	3,027	412	864
1967	6,821	2,049	9,178	2,320	3,456	423	976
1968	6,992	2,210	10,326	2,476	3,556	414	935
1969	7,351	2,163	11,211	2,392	4,120	447	1,055
1970	7,981	2,476	13,467	2,358	4,916	544	1,222
1971	8,043	2,546	13,674	2,395	4,967	549	1,246
1972	8,406	2,498	15,762	2,520	5,705	627	1,371
1973	9,552	2,432	17,815	2,848	6,434	593	1,515
1974	10,317	2,832	20,723	3,413	7,004	644	2,476
1975	10,207	3,071	20,774	3,439	7,274	828	2,420
1976	11,996	3,435	24,182	3,893	8,998	981	2,768
1977	13,146	3,807	27,956	4,247	10,527	968	3,270
1978	14,346	3,899	32,255	4,741	11,992	1,295	3,877
1979	16,082	4,319	35,573	5,365	12,454	1,710	4,510
1980	17,533	4,728	35,187	5,995	13,419	1,729	4,956
1981	16,793	4,871	37,614	6,493	14,184	1,919	6,392
1982	15,546	5,105	37,007	5,883	14,025	2,133	6,824
1983	16,196	5,322	39,420	5,763	16,529	2,230	7,050
1984	18,727	6,158	43,634	5,999	19,119	2,230	8,209
1985	17,403	6,224	45,214	5,855	18,367	1,970	8,746
1986	17,487	7,153	48,760	5,947	19,826	1,647	9,117
1987	17,127	7,469	50,877	6,298	24,437	1,901	10,374
1988	18,615	7,640	54,671	7,116	27,517	1,741	11,156
1989	15,945	8,438	57,738	7,525	26,896	1,689	12,606
1990	17,096	8,810	60,509	7,810	27,980	1,859	13,053
1991 ^P	17,364	9,427	61,677	8,331	28,400	2,013	13,626

^P preliminary.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July issues, Table 6.1C or equivalent.



Source: See Table 54.

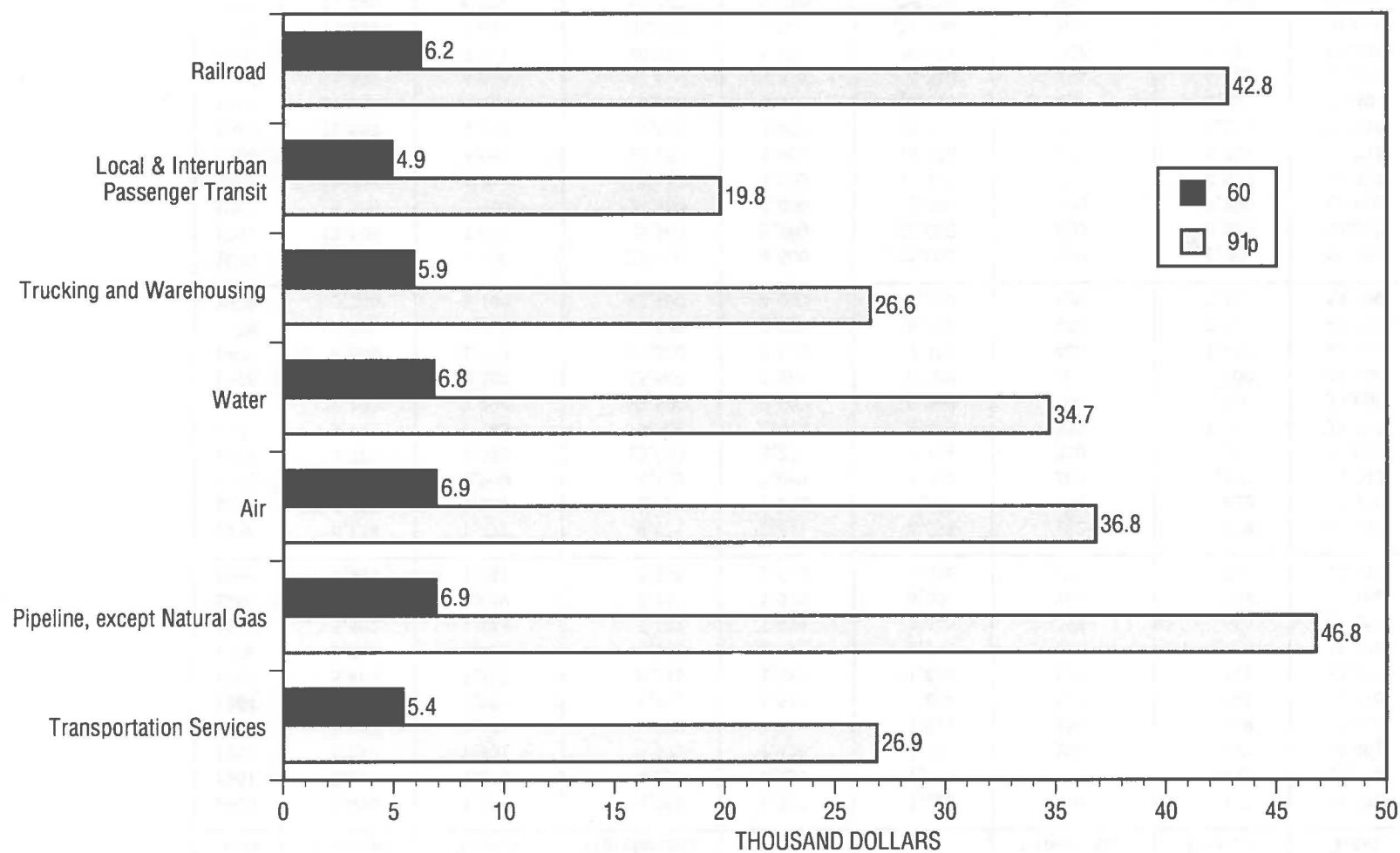
Figure 44. National Income by Transportation Sector, 1961-1991

Table 55. Wages and Salaries per Full-Time Employee by Transportation Sector, 1960-1991 (dollars)

Year	Railroad	Local and Interurban Passenger Transit	Trucking and Warehousing	Water	Air	Pipeline, except Natural Gas	Transportation Services
1960	6,228	4,990	5,957	6,832	6,868	6,870	5,387
1961	6,388	5,149	6,123	7,003	7,186	7,364	5,516
1962	6,610	4,985	7,031	7,059	7,269	7,524	5,935
1963	6,762	5,120	7,328	7,317	7,443	7,800	6,078
1964	7,025	5,286	7,719	7,507	7,869	8,105	6,325
1965	7,415	5,438	8,035	7,770	8,122	8,500	6,605
1966	7,660	5,615	8,362	8,310	8,363	8,667	6,761
1967	8,034	5,801	8,672	8,619	8,846	8,778	7,120
1968	8,585	6,101	9,287	9,120	9,396	9,222	7,570
1969	9,230	6,296	9,906	9,990	10,270	9,722	8,020
1970	10,013	6,596	10,430	10,662	11,407	10,706	8,608
1971	11,208	6,909	11,587	10,994	12,294	11,412	9,029
1972	11,991	7,451	10,489	10,995	13,946	11,883	9,141
1973	13,773	7,876	11,342	12,005	14,738	13,125	9,730
1974	14,242	8,488	11,964	12,880	15,657	14,563	10,488
1975	15,363	9,299	12,709	14,247	17,084	16,765	11,233
1976	17,164	9,983	13,826	15,549	18,449	17,833	11,935
1977	18,774	10,588	14,939	17,192	20,123	19,444	12,560
1978	20,597	11,359	16,240	18,635	21,810	19,750	13,293
1979	23,009	12,057	17,367	20,477	23,245	24,450	14,291
1980	25,385	13,224	18,864	22,990	25,498	26,182	15,604
1981	27,437	14,079	20,414	24,780	27,991	28,091	16,970
1982	29,692	15,224	21,231	26,068	29,448	32,905	18,709
1983	33,738	15,258	21,503	26,822	30,970	33,952	18,819
1984	35,474	15,333	21,982	27,802	30,761	35,632	19,506
1985	36,746	15,813	22,291	28,435	31,798	36,947	20,207
1986	38,153	16,283	22,699	28,900	32,023	38,722	20,819
1987	40,134	16,707	23,507	29,341	32,446	39,667	21,770
1988	40,862	17,356	24,217	30,616	33,033	42,611	23,080
1989	40,662	17,719	24,708	31,841	33,735	42,389	23,981
1990	41,814	18,793	25,794	33,593	35,219	43,632	25,564
1991 ^P	42,793	19,757	26,643	34,727	36,827	46,842	26,901

^P preliminary.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July issues, Table 6.6C or equivalent.



p preliminary.
Source: See Table 55.

Figure 45. Wages and Salaries per Full-Time Employee by Transportation Sector, 1960 and 1991

Table 56. Wages and Salaries by Transportation Sector, 1960-1991
(million dollars)

Year	Railroad	Local and Interurban Passenger Transit	Trucking and Warehousing	Water	Air	Pipeline, except Natural Gas	Transportation Services	Total
1960	5,499	1,293	4,558	1,377	1,268	160	423	14,578
1961	5,197	1,296	4,630	1,359	1,336	161	435	14,414
1962	5,242	1,301	4,992	1,426	1,432	158	457	15,008
1963	5,207	1,321	5,298	1,456	1,511	156	468	15,417
1964	5,305	1,352	5,702	1,554	1,676	154	503	16,246
1965	5,466	1,397	6,215	1,585	1,860	153	541	17,217
1966	5,546	1,460	6,765	1,795	2,141	156	595	18,458
1967	5,592	1,543	7,102	1,879	2,645	158	655	19,754
1968	5,726	1,629	7,857	1,979	3,099	166	704	21,160
1969	5,935	1,681	8,688	2,048	3,656	175	794	22,977
1970	6,114	1,771	9,031	2,141	4,038	182	878	24,155
1971	6,604	1,834	10,138	1,985	4,221	194	922	25,358
1972	6,799	1,900	11,422	2,089	4,588	202	1,042	28,042
1973	7,782	1,976	13,032	2,281	5,114	210	1,187	31,582
1974	8,172	2,143	13,866	2,473	5,480	233	1,353	33,720
1975	8,100	2,400	13,800	2,600	5,900	300	1,500	34,600
1976	9,100	2,500	15,600	2,800	6,500	300	1,700	38,500
1977	9,800	2,600	17,800	3,100	7,300	400	1,900	42,900
1978	10,700	2,800	20,600	3,700	8,400	400	2,200	48,800
1979	12,200	3,100	22,900	4,000	9,800	500	2,600	55,100
1980	12,800	3,400	23,700	4,600	11,000	600	3,000	59,100
1981	13,100	3,600	25,300	5,100	12,000	600	3,500	63,200
1982	12,300	3,700	24,800	5,000	12,400	700	3,900	62,800
1983	12,213	3,784	25,417	4,828	13,317	713	4,065	64,337
1984	12,948	4,002	28,181	5,060	14,150	677	4,701	69,719
1985	12,567	4,238	29,535	5,033	15,581	702	5,274	72,930
1986	11,980	4,494	30,825	4,913	16,876	697	5,621	75,406
1987	11,679	4,846	33,819	4,882	18,510	714	6,183	80,633
1988	11,809	5,311	36,785	5,021	20,051	767	6,924	86,668
1989	11,548	5,670	38,397	5,222	21,894	763	7,602	91,096
1990	11,248	6,070	40,162	5,610	24,125	829	8,385	96,429
1991 ^P	10,955	6,421	40,790	5,973	24,969	890	8,689	98,687

^P preliminary.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July issues, Table 6.3C or equivalent.

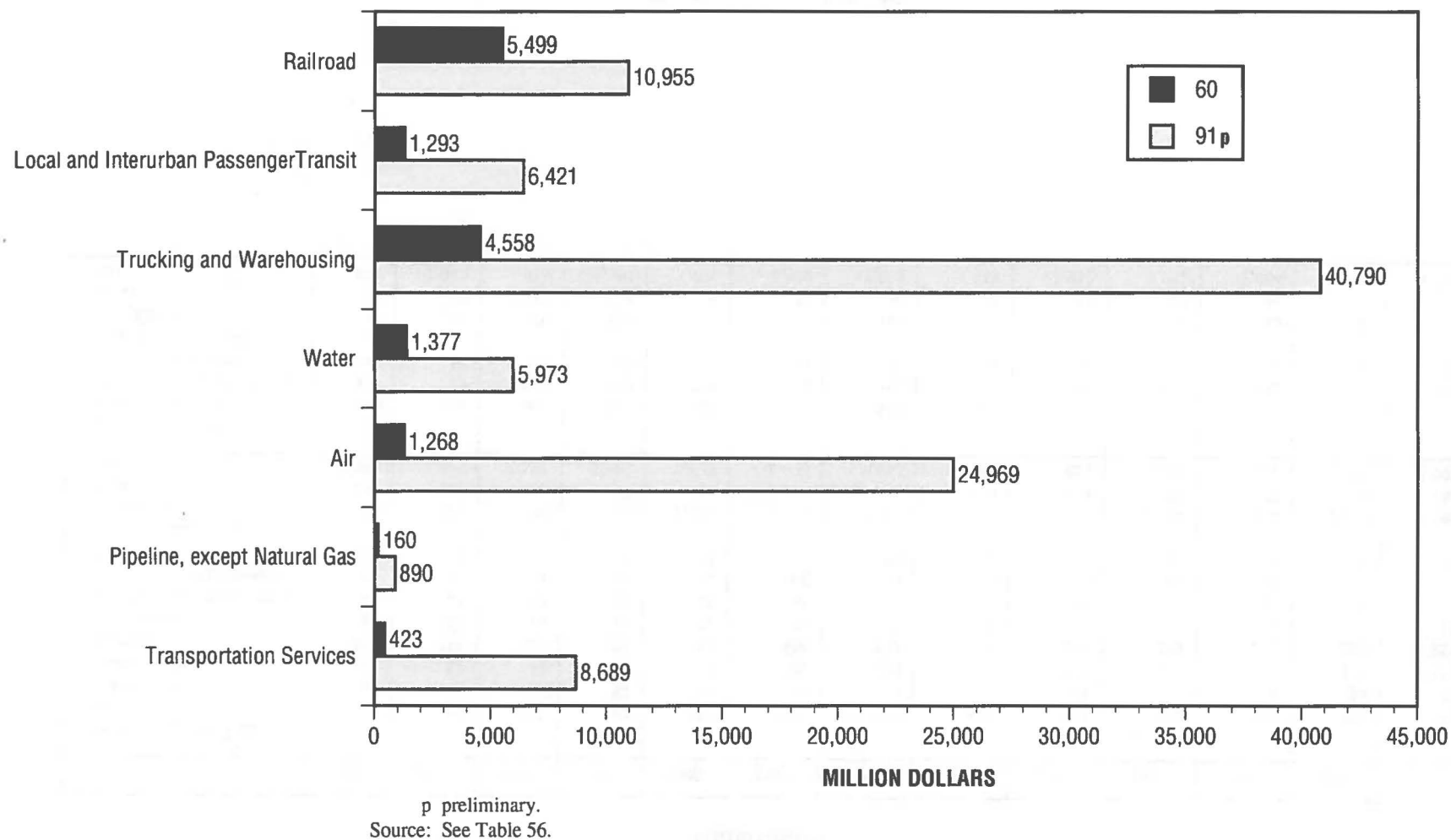


Figure 46. Wages and Salaries by Transportation Sector, 1960 and 1991

**Table 57. Employment in Transportation and Related Industries,
(at 5-year Intervals 1960-1985 and Annually 1986-1992) (page 1 of 2)
(thousands)**

	1960	1965	1970	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
TRANSPORT SECTOR													
Air	191	229	351	362	453	537	567	603	644	684	789	750	732
Bus-intercity	41	42	43	39	38	36	33	30	29	31	20	24	24
Local Transport	101	83	77	69	79	90	100	109	119	128	136	145	157
Railroad	885	735	627	538	532	346	332	309	299	293	285	269	259
Oil Pipeline	23	20	18	17	21	19	15	16	16	19	20	19	19
Gas Pipeline (transmission)	43	43	45	44	45	46	48	44	43	37	37	38	-
(distribution)	49	49	51	50	52	62	59	60	60	64	65	63	-
Taxi	121	110	107	83	53	38	36	35	36	34	33	32	30
Trucking and Truck Terminals	770	882	998	996	1,189	1,285	1,297	1,361	1,434	1,599	1,534	1,517	1,495
Water	232	230	215	190	213	214	176	174	174	173	173	174	186
Total	2,566	2,423	2,532	2,388	2,675	2,673	2,663	2,741	2,854	3,062	3,092	3,031	2,902
EQUIPMENT MFG.													
Aircraft and Parts	646	624	669	514	652	647	678	700	695	711	709	651	617
Motor Vehicles and Equip.	829	945	914	892	789	964	960	952	941	945	886	861	895
Railroad Equipment	43	56	51	52	71	34	29	28	32	34	34	31	29
Ship & Boat Building and Repair	141	160	170	194	221	193	185	187	193	194	189	176	170
Other	33	57	111	115	38	51	50	52	51	48	46	41	42
Total	1,692	1,842	1,915	1,767	1,771	1,889	1,902	1,919	1,912	1,932	1,864	1,760	1,753

**Table 57. Employment in Transportation and Related Industries,
(at 5-year Intervals 1960-1985 and Annually 1986-1992) (page 2 of 2)
(thousands)**

	1960	1965	1970	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
RELATED INDUSTRIES													
Automotive and													
Accessories Retailers	807	902	996	1,076	1,048	1,185	1,258	1,301	1,362	1,294	1,292	1,229	1,229
Automotive Wholesalers	215	255	320	367	418	433	431	430	431	456	451	452	438
Automotive Repair, Services, and Parking	251	324	384	400	571	730	763	795	837	888	926	916	878
Gasoline Service Stations	461	522	614	616	561	611	596	608	627	642	641	636	616
Highway and Street Construction	294	324	331	297	268	264	265	269	254	234	245	226	219
Petroleum	311	292	333	380	533	568	471	442	448	436	521	518	488
Other Industries:													
Truck Drivers and Deliverymen	1,477	1,521	1,565	1,796	1,931	2,050	2,050	2,160	2,155	2,105	2,148	2,193	2,185
Shipping and Receiving Clerks	240	300	411	433	515	491	455	476	521	550	546	550	555
Total	4,056	4,440	4,954	5,365	5,845	6,332	6,289	6,481	6,635	6,605	6,770	6,720	6,608
GOVERNMENT EMPLOYMENT													
U.S. DOT	38	45	67	75	72	62	61	62	64	66	67	66	70
State and Local Highway	499	550	568	569	559	549	550	553	555	563	569	590	570
U.S. Postal Service	83	83	103	98	92	104	110	113	116	117	115	113	114
Other	18	16	12	13	13	11	9	9	11	12	11	10	11
Total	638	694	744	755	736	726	730	737	746	758	762	779	765
Total Transportation	8,952	9,397	10,151	10,275	11,027	11,620	11,584	11,878	12,147	12,357	12,488	12,290	12,028
Total Civilian Labor Force	65,778	71,088	78,627	84,783	97,545	108,063	109,084	113,679	115,978	117,689	117,287	116,877	117,598
Percent Transportation	13.6	13.2	12.9	12.1	11.3	10.7	10.6	10.4	10.5	10.5	10.6	10.5	10.2

Source: See Appendix A, pp. 21, 22, 23.

Table 58. National Transportation and Economic Trends, 1960-1991
(billions)

Year	Passenger-Miles	Index	Revenue Ton-Miles	Index	Population (millions)	Index	Industrial Production Index*	Gross Domestic Product		
								(current dollars)	Index	(constant 1987 dollars)
1960	1,554	54	1,557	50	181	79	38	513	19	1,971
1961	1,582	55	1,615	52	184	81	38	532	20	2,024
1962	1,634	57	1,682	54	187	82	42	572	21	2,128
1963	1,695	59	1,762	57	189	83	44	603	22	2,216
1964	1,770	61	1,847	59	192	84	47	648	24	2,341
1965	1,844	64	1,930	62	194	85	58	703	26	2,471
1966	1,923	67	1,959	63	197	86	56	770	28	2,616
1967	1,998	69	2,042	66	199	87	58	814	30	2,685
1968	2,091	72	2,130	69	201	88	61	889	33	2,797
1969	2,177	75	2,190	70	203	89	64	960	35	2,873
1970	2,246	78	2,289	74	205	90	61	1,011	37	2,874
1971	2,349	81	2,307	74	208	91	62	1,097	41	2,956
1972	2,487	86	2,417	78	210	92	68	1,207	45	3,107
1973	2,565	89	2,550	82	212	93	74	1,350	50	3,269
1974	2,604	90	2,783	90	214	94	73	1,459	54	3,248
1975	2,543	88	2,657	85	216	95	66	1,586	59	3,222
1976	2,664	92	2,514	81	218	96	72	1,768	65	3,381
1977	2,786	96	2,684	86	220	97	78	1,974	73	3,533
1978	2,919	101	3,012	97	223	98	83	2,233	92	3,704
1979	2,887	99	3,064	99	225	99	86	2,488	92	3,797
1980	2,889	100	3,108	100	228	100	84	2,708	100	3,776
1981	2,911	101	2,992	96	230	101	86	3,031	112	3,843
1982	2,968	103	2,880	93	232	102	82	3,150	116	3,760
1983	3,075	106	3,013	97	234	103	85	3,405	126	3,907
1984	3,191	110	3,076	99	236	104	93	3,777	139	4,149
1985	3,266	113	3,060	98	238	105	94	4,039	149	4,280
1986	3,387	117	3,076	99	241	106	95	4,269	158	4,405
1987	3,496	121	3,199	103	243	107	100	4,540	168	4,540
1988	3,649	126	3,305	106	245	108	105	4,900	171	4,719
1989	3,710	128	3,256	105	247	109	108	5,251	194	4,838
1990	3,803	132	3,296	106	250	110	109	5,522	204	4,878
1991	3,848	133	3,296	106	253	110	107	5,678	210	4,821

Index (1980=100).

* Index (1987=100).

Source: See Appendix A, p. A-23.

Table 59. Passenger and Freight Transportation Expenditures, (at 5-year Intervals 1960-1985 and Annually 1986-1991)
(million dollars)

TYPE OF EXPENDITURE	1960	1965	1970	1975	1980	1985	1986	1987	1988	1989	1990	1991
Passenger Transportation Expenditures												
Auto Purchases and Ownership ¹	52,370	71,628	96,977	156,550	276,699	410,313	407,079	435,957	480,930	498,005	517,283	500,357
Local												
Bus	668	727	921	2,348	4,649	6,774	7,239	7,570	7,826	7,964	8,326	8,739
Taxi	1,107	1,113	2,145	3,416	5,195	5,636	6,000	6,364	6,909	7,091	7,455	7,921
School Bus	486	707	1,219	2,174	3,833	5,900	6,419	6,766	7,111	7,330	7,500	7,700
Intercity												
Bus	559	629	799	1,016	1,709	1,989	1,890	1,826	2,036	2,185	2,010	2,090
Total Highway Passenger Transportation Expenditures	55,190	74,804	102,081	165,504	284,752	430,612	428,627	458,483	504,812	522,575	542,574	526,807
Air	3,555	5,682	10,565	18,851	38,135	50,319	51,202	57,256	63,750	67,667	73,410	73,739
Rail ²	759	598	464	1,212	2,976	3,875	4,880	4,061	4,071	4,494	4,521	4,473
Transit ³	669	727	920	2,349	4,648	6,774	7,239	7,570	7,826	7,964	8,326	8,739
Water	281	345	287	294	303	517	584	701	868	975	1,327	1,357
Total Passenger Transportation Bill	60,454	82,156	114,317	188,210	330,814	492,097	492,532	528,071	581,327	603,675	630,158	615,115
Freight Transportation Expenditures												
Truck Intercity												
ICC-authorized	7,214	10,068	14,585	22,000	43,000	54,200	58,100	61,000	66,500	70,500	75,500	78,300
Non-ICC-authorized	10,744	13,560	18,968	25,400	51,551	69,000	70,100	73,800	76,200	80,800	86,800	89,100
Truck Local	14,289	23,779	28,819	37,287	60,545	82,200	84,800	89,600	96,200	102,450	108,350	110,500
Bus Intercity	42	70	122	156	235	245	226	185	163	166	126	131
Total Highway Freight Transportation Expenditures	32,289	47,477	62,494	84,843	155,331	205,645	213,226	224,585	239,063	253,916	270,776	278,031
Air	354	708	1,171	1,838	4,013	6,817	7,559	8,859	10,367	11,853	13,712	14,865
Oil Pipeline	895	1,051	1,396	2,220	7,548	8,910	8,098	8,463	8,224	7,832	8,387	8,098
Rail	9,028	9,923	11,869	16,509	27,858	29,150	27,933	28,468	29,899	29,922	30,403	29,852
Water	3,487	3,903	5,257	8,221	15,498	18,449	18,793	18,663	20,057	19,821	20,848	20,560
Other	1,714	1,869	1,791	2,208	2,206	1,675	1,728	1,854	1,912	2,137	3,970	4,166
Total Freight Transportation Bill	47,767	64,931	83,978	115,839	212,454	270,646	277,937	290,892	309,522	325,481	348,096	355,572
Total Highway Passenger and Freight Transportation Expenditures	87,749	122,281	164,575	250,347	440,083	636,257	641,853	683,068	743,875	776,491	813,350	804,838
Total Passenger and Freight Transportation Bill	108,221	147,087	198,295	304,049	543,268	762,743	770,469	818,963	890,849	429,156	978,254	970,687
Passenger and Freight Transportation Percent of GDP	17.1%	17.4%	16.3%	15.8%	16.2%	15.8%	15.0%	15.0%	15.2%	14.8%	14.7%	14.2%
Gross Domestic Product (billions)	513	703	1,011	1,586	2,708	4,039	4,269	4,540	4,900	5,251	5,522	5,678

¹ Includes business expenditures for passenger cars.

² Data include Federal and state/local authorities operating subsidies and capital grants.

³ One-half of amount for "Bus and Transit" shown in source.

Source: Eno Foundation for Transportation, *Transportation In America*, 1993, pp. 40, 42 and previous editions published by the Transportation Policy Associates.

Table 60. U.S. Government Transportation Research, Planning and R&D Outlays
(at 5-Year Intervals 1965-1985 and Annually 1986-1992)
(million dollars)

	1965	1970	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
General												
Dept. of Transportation	2.0	8.1	33.3	22.1	7.5	6.2	6.9	7.1	6.3	20.5	16.8	8.3
Dept. of Agriculture	5.9	9.0	11.6	12.5	15.1	14.8	16.8	17.5	17.9	18.3	20.1	21.2
Total	7.9	17.1	44.9	34.6	22.6	21.0	23.7	24.6	24.2	38.8	36.9	29.5
Air												
FAA - aviation	96.8 ^a	214.4 ^a	104.9	127.5	279.3	313.7	190.8	193.0	154.3	173.3	196.4	331.1
NASA - aircraft technical	65.6	187.3	305.8	510.7	651.8	615.1	658.5	651.8	790.6	807.7	918.4	1,214.4
Total	162.4	401.7	410.7	638.2	931.1	928.8	849.3	844.8	944.9	981.0	1,114.8	1,352.5
Highway												
FHWA - highways ^b	-	94.2	20.1	42.2	41.4	37.7	36.9	38.1	44.1	44.4	46.6	48.9
NHTSA/FHWA - safety	-	14.0	21.8	50.1	36.9	36.8	48.7	44.0	43.7	40.9	44.9	51.3
Total	38.0	108.2	42.9	92.3	78.3	74.5	85.6	82.1	87.8	85.3	91.5	100.2
Rail - FRA	-	16.4	43.0	47.8	15.0	15.4	13.2	10.6	7.0	21.6	19.8	21.5
Transit - FTA	1.0	7.6	88.6	75.7	40.1	22.6	21.7	18.8	18.9	13.5	12.8	11.5
Water												
Maritime Administration	9.3	12.7	26.5	31.2	12.4	14.2	8.8	11.2	9.9	10.0	10.4	12.1
Coast Guard	-	10.1	16.6	21.9	18.4	16.7	17.8	14.9	18.1	24.2	16.4	23.6
Total	9.3	22.8	43.1	53.1	30.8	30.9	26.6	26.1	28.0	34.2	26.8	35.7
Total Transportation R&D	218.6	495.6	672.2	941.7	1,117.9	1,093.2	1,020.1	1,007.0	1,110.8	1,174.4	1,302.6	1,550.9
Total U.S. Government R&D	14,889	15,632	19,525	30,389	45,244	51,576	52,862	56,018	59,897	64,674	66,281	71,956
% Trans. R&D of Total U.S.	1.5%	3.2%	3.4%	3.1%	2.5%	2.1%	1.9%	1.8%	1.9%	1.8%	2.0%	2.2%

^a Includes R&D outlays for U.S. supersonic transport program, which was subsequently phased down to basic research.

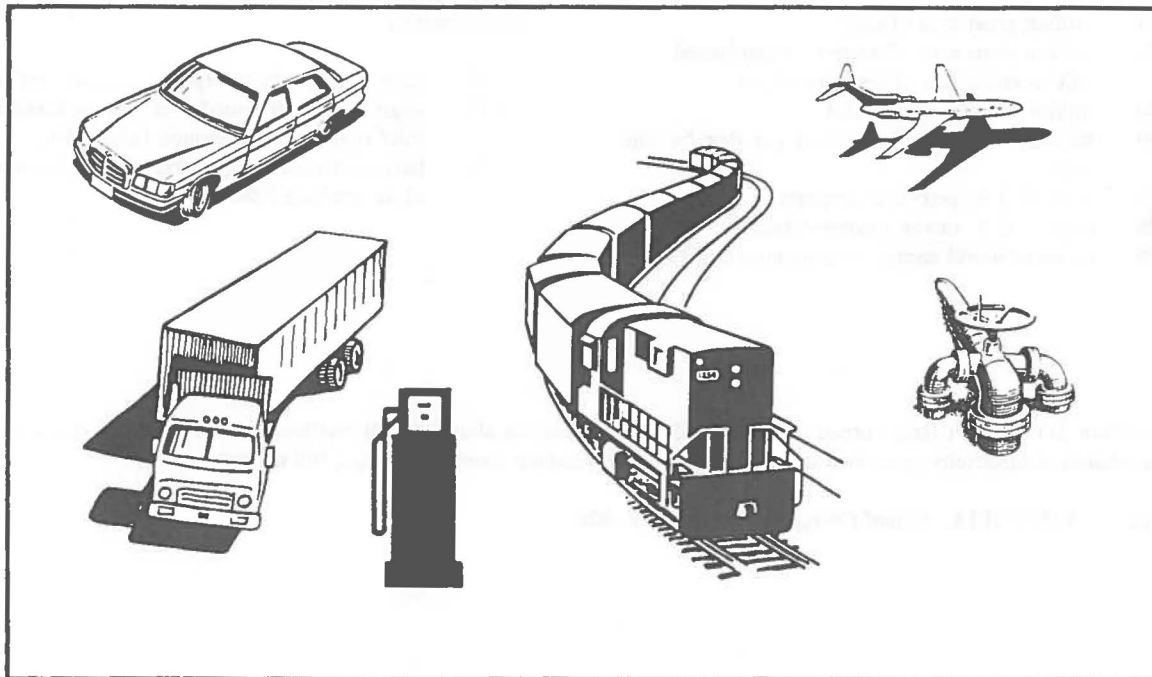
^b Does not include considerable research funded by FHWA but administered by States.

Source: Eno Foundation for Transportation, *Transportation in America*, 1993, p. 74.

SUPPLEMENTARY DATA

Section II: Energy in Transportation

Energy in Transportation is the second part of the supplementary data section. This section details the relationship between energy and transportation, particularly in the areas of Energy Consumption, Energy Intensiveness, Energy Transport, and Energy Supply and Demand for the years 1960-1991/1992. Some data are illustrated for 1955.



Energy Equivalents

1 Btu of Energy equals approximately:

1	match tip
250	calories (International Steam Table)
0.25	kilocalories (food calories)

1,000 Btu of energy equals approximately:

250	kilocalories (food calories)
-----	------------------------------

1 Million Btu of Energy equals approximately:

90	pounds of coal
8	gallons of motor gasoline or enough to move the average U.S. passenger car about 174 miles (1991)
10	therms of dry natural gas
11	gallons of propane
1.1	days of U.S. energy consumption per capita

1 Quadrillion Btu of Energy equals approximately:

45	million short tons of coal
60	million short tons of oven-dried hardwood
1	trillion cubic feet of dry natural gas
170	million barrels of crude oil
470	thousand barrels of crude oil per day for one year
23	days of U.S. petroleum imports
26	days of U.S. motor gasoline usage
25	hours of world energy consumption (1991)

One Barrel of Crude Oil equals approximately:

15	days of U.S. petroleum consumption per capita
5.6	thousand cubic feet of dry natural gas
0.26	short tons (520 pounds) of coal
1,700	kilowatthours of electricity

One Short Ton of Coal equals approximately:

105	days of U.S. coal consumption per capita
3.8	barrels of crude oil
21	thousand cubic feet of dry natural gas
6,500	kilowatthours of electricity

1,000 Cubic Feet of Natural Gas equals approximately:

4.7	days of natural gas consumption per capita
0.18	barrels (7.4 gallons) of crude oil
0.047	short tons (93 pounds) of coal
300	kilowatthours of electricity

1,000 Kilowatthours (kWh) of electricity equals approximately:

33	days of U.S. electricity consumption per capita
0.15	short tons (310 pounds) of coal (it takes about 0.47 short tons to produce 1,000 kWh)
0.59	barrels of crude oil (it takes about 1.8 barrels of oil to produce 1,000 kWh)

One million Btu of fossil fuels burned at electric utilities can generate about 100 kilowatthours of electricity, while about 300 kilowatthours of electricity generated at electric utilities can produce about one million Btu of heat.

Source: U.S. DOE/EIA, *Annual Energy Review 1992*, p. 326.

Part 1. Energy Consumption

This section details the amount of fuel consumed by each mode of transportation and end-use sector. Also presented are fuel price data for 1960-1991/1992. In some instances, data are shown for 1955.

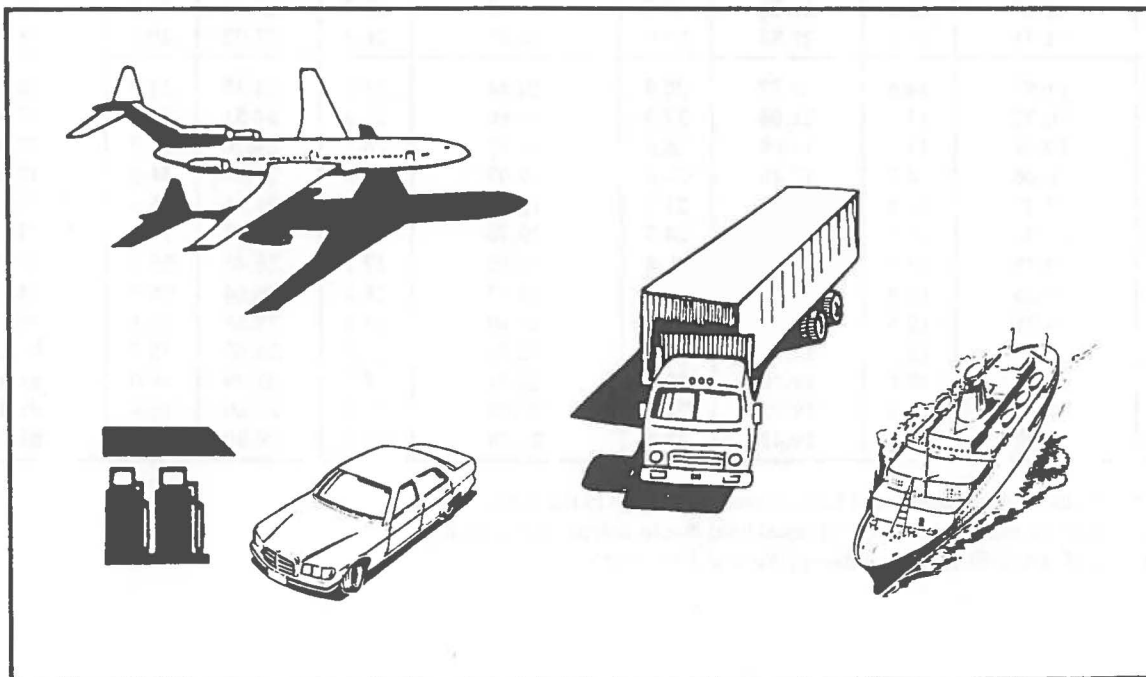


Table 61. Consumption of Energy by Sector, 1955-1991
(quadrillion Btu)

Year	Residential and Commercial ^a	% of Total	Industrial	% of Total	Transportation ^a	% of Total	Electric Utilities	% of Total	Total Energy Consumption
1955	7.39	19.0	15.42	39.7	9.48	24.4	6.50	16.7	38.82
1960	8.75	20.0	16.26	37.1	10.56	24.1	8.19	18.7	43.80
1961	8.96	20.2	16.26	36.6	10.73	24.1	8.47	19.1	44.46
1962	9.45	20.3	16.83	36.2	11.19	24.0	9.03	19.4	46.53
1963	9.48	19.6	17.56	36.3	11.62	24.0	9.63	19.9	48.32
1964	9.60	19.0	18.56	36.8	11.96	23.7	10.33	20.5	50.50
1965	10.00	19.0	19.24	36.5	12.40	23.5	11.01	20.9	52.68
1966	10.47	18.8	20.09	36.1	13.07	23.5	11.99	21.5	55.66
1967	11.04	19.2	20.08	34.9	13.72	23.8	12.70	22.1	57.57
1968	11.40	18.7	20.85	34.2	14.83	24.3	13.88	22.8	61.00
1969	11.90	18.5	21.61	33.7	15.47	24.1	15.18	23.6	64.19
1970	12.14	18.3	21.92	33.0	16.06	24.2	16.27	24.5	66.43
1971	12.35	18.2	21.66	31.9	16.69	24.6	17.15	25.3	67.89
1972	12.64	17.8	22.39	31.4	17.68	24.8	18.52	26.0	71.26
1973	12.27	16.5	23.54	31.7	18.58	25.0	19.85	26.7	74.28
1974	11.77	16.2	22.62	31.2	18.09	24.9	20.02	27.6	72.54
1975	11.60	16.5	20.36	28.9	18.21	25.8	20.35	28.9	70.55
1976	12.25	16.5	21.44	28.8	19.07	25.6	21.57	29.0	74.36
1977	11.87	15.6	21.88	28.7	19.78	25.9	22.71	30.1	76.29
1978	11.91	15.3	21.84	28.0	20.58	26.4	23.72	30.4	78.09
1979	11.53	14.6	22.77	28.9	20.44	25.9	24.13	30.6	78.90
1980	10.72	14.1	21.04	27.7	19.66	25.9	24.51	32.3	75.96
1981	10.04	13.6	19.68	26.6	19.47	26.3	24.76	33.5	73.99
1982	10.06	14.2	17.45	24.6	19.03	26.9	24.27	34.3	70.85
1983	9.72	13.8	16.72	23.7	19.10	27.1	24.96	35.4	70.52
1984	10.04	13.5	18.29	24.7	19.76	26.7	25.98	35.1	74.10
1985	9.78	13.2	17.63	23.8	20.02	27.1	26.48	35.8	73.95
1986	9.56	12.9	17.24	23.2	20.77	28.0	26.64	35.9	74.24
1987	9.71	12.6	18.15	23.6	21.40	27.8	27.55	35.9	76.84
1988	10.29	12.8	18.99	23.7	22.26	27.8	28.63	35.7	80.20
1989	10.41	12.8	19.10	23.5	22.51	27.7	29.29	36.0	81.35
1990	9.62	11.8	19.55	24.0	22.48	27.7	29.60	36.4	81.29
1991	9.90	12.1	19.43	23.8	22.24	27.3	29.90	36.7	81.51

^a Includes only those fossil fuels consumed directly in the sector.

Note: Sum of components may not equal total due to independent rounding.

Source: U.S. DOE/EIA, *Annual Energy Review 1991*, Table 5.

**Table 62. U.S. Energy Consumption by the Transportation Sector,
(at 5-Year Intervals 1955-1965 and Annually 1966-1992)**

Year	Petroleum		Natural Gas ^a		Total Fossil Fuels ^b	Sales of Electricity ^c		Total Transportation Consumption		Total Gross Energy Consumption
	Million Barrels	Trillion Btu ^d	Trillion Cubic Feet	Trillion Btu ^d	Trillion Btu	Million Kilowatt-Hours	Trillion Btu ^d	Trillion Btu ^e	% of Total Gross Energy Consumption	Quadrillion Btu
1955	1,627.9	8,804	0.25	259	9,063	4,563	15.6	9,079	23.4	38.82
1960	1,881.2	10,136	0.35	259	10,498	4,770	16.3	10,514	24.0	43.80
1965	2,204.6	11,876	0.50	516	12,392	4,652	15.9	12,408	23.6	52.68
1966	2,314.1	12,473	0.54	558	13,047	4,514	15.4	13,062	23.3	55.99
1967	2,427.3	13,095	0.58	599	13,707	4,572	15.6	13,723	23.7	57.89
1968	2,627.9	14,185	0.59	608	14,804	4,540	15.5	14,820	24.2	61.32
1969	2,737.5	14,772	0.63	650	15,430	4,531	15.5	15,446	23.9	64.53
1970	2,839.7	15,315	0.72	742	16,057	4,633	15.8	16,073	24.3	66.43
1971	2,952.9	15,913	0.74	763	16,676	4,537	15.5	16,692	24.6	67.89
1972	3,136.6	16,900	0.77	791	17,691	4,440	15.1	17,706	24.8	71.26
1973	3,305.0	17,831	0.73	745	18,576	4,186	14.3	18,590	25.0	74.28
1974	3,225.6	17,399	0.67	686	18,085	4,258	14.5	18,100	25.0	72.54
1975	3,266.7	17,614	0.58	592	18,206	4,273	14.6	18,221	25.8	70.55
1976	3,430.2	18,506	0.55	560	19,066	4,338	14.8	19,081	25.7	74.36
1977	3,563.1	19,241	0.53	540	19,781	4,212	14.4	19,795	25.9	76.29
1978	3,708.5	20,041	0.53	538	20,579	4,336	14.8	20,594	26.4	78.09
1979	3,652.3	19,825	0.60	611	20,436	4,256	14.5	20,451	25.9	78.90
1980	3,494.1	19,008	0.63	645	19,653	4,275	14.6	19,668	25.9	75.96
1981	3,463.0	18,811	0.64	657	19,468	4,206	14.4	19,482	26.3	73.99
1982	3,397.0	18,420	0.60	616	19,036	4,288	14.6	19,051	26.9	70.85
1983	3,433.6	18,593	0.49	505	19,098	4,300	14.7	19,113	27.1	70.52
1984	3,544.1	19,216	0.53	546	19,762	4,483	15.3	19,777	26.7	74.14
1985	3,596.5	19,504	0.50	516	20,020	4,704	16.1	20,036	27.1	73.98
1986	3,734.8	20,269	0.49	504	20,773	4,714	16.1	20,789	28.0	74.29
1987	3,843.6	20,871	0.52	536	21,407	4,878	16.6	21,424	27.9	76.89
1988	3,980.3	21,629	0.61	629	22,257	5,110	17.4	22,274	27.8	80.22
1989	4,019.9	21,868	0.63	649	22,517	5,294	17.7	22,535	27.7	81.33
1990	4,005.5	21,810	0.66	680	22,490	5,255	18.1	22,508	27.7	81.27
1991	3,942.7	21,456	0.80	691	22,147	5,250	17.9	22,165	27.3	81.21
1992 ^f	3,999.3	21,772	0.70	722	22,494	5,190	17.7	22,512	27.3	82.35

^fPreliminary.

^aPipeline Fuel.

^bSum of Petroleum and Natural Gas.

^cIncludes only energy used by Railroads and Railways.

^d Btu's derived by multiplying by conversion factors in Table A4 for Petroleum in Transportation, Table A5 for Natural Gas Consumption by Nonutility, and Table A9 for Electricity Consumption, U.S. DOE/EIA, *Monthly Energy Review*, April 1993.

^e Sum of Total Fossil Fuels and Sales of Electricity.

Source: U.S. DOE/EIA, *Monthly Energy Review*, April 1993. Petroleum: Table 2.5; Natural Gas: Table 4.3; Total Gross Energy Consumption: Table 2.2. Sales of Electricity: Edition Electric Institute, *Statistical Year Book*.

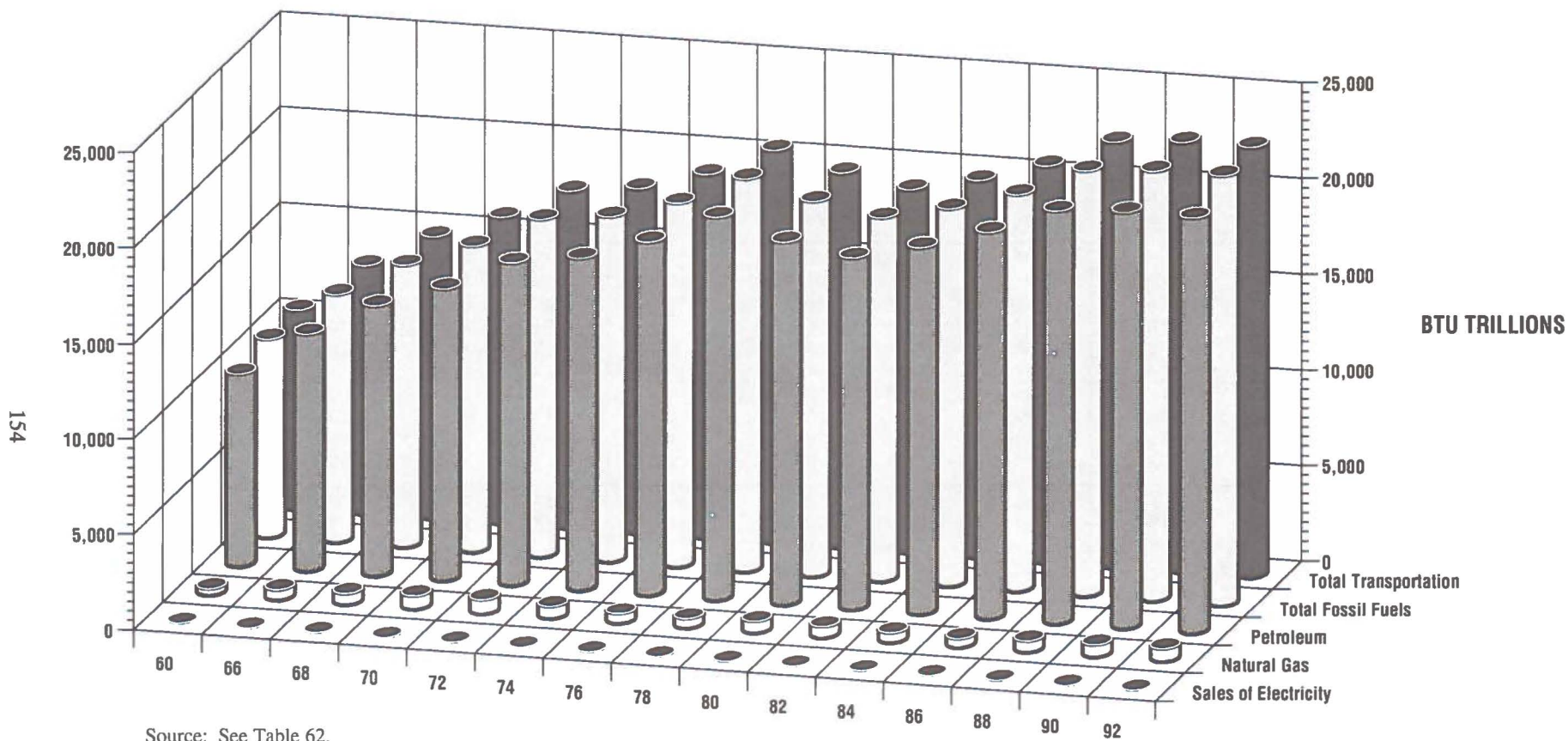


Figure 47. U.S. Energy Consumption by the Transportation Sector, 1960-1992

Table 63. U.S. Government Energy Consumption, Fiscal Years 1975-1992
(trillion Btu)

Activity	1975	1980	1985	1990	1991	1992 ^e
Agency						
Defense	1,558.1	1,183.1	1,250.6	1,241.7	1,269.3	1,269.3
Energy	85.2	47.4	52.1	43.4	41.8	44.5
Postal Service	59.2	27.2	27.8	30.6	30.8	31.5
Veterans Affairs	39.2	24.8	25.1	24.9	25.3	25.3
Transportation	28.5	19.2	19.5	19.0	18.8	18.8
General Services Admin.	43.0	18.1	17.1	14.2	14.0	14.1
NASA	26.4	10.4	10.9	12.3	12.3	12.3
Agriculture	11.9	8.6	8.2	9.5	9.6	9.6
Health and Human Services	9.3	6.0	7.0	8.0	6.9	6.9
Justice	7.1	5.7	8.2	7.0	8.0	8.0
Interior	12.3	8.5	8.1	7.4	6.9	7.0
Other ¹	14.8	12.3	10.7	15.0	13.1	13.4
Total	1,895.0	1,371.2	1,445.5	1,433.0	456.6	1,460.1
Energy Source						
Petroleum	1,162.0	1,011.8	1,053.6	1,020.5	1,049.1	1,050.4
Jet Fuel	707.4	638.7	705.7	732.4	774.5	774.6
Distillate & Residual Fuel	364.7	307.7	291.5	244.1	236.1	235.8
Motor Gasoline	63.4	56.5	51.0	37.2	34.4	34.7
Liquefied Petroleum Gases	5.4	4.0	4.0	6.3	3.7	4.8
Aviation Gasoline	21.1	4.9	1.9	0.5	0.4	0.5
Electricity	481.2	141.9	165.4	192.4	189.9	190.4
Natural Gas	166.2	147.3	149.0	157.1	153.5	154.4
Coal	77.9	63.5	64.0	44.2	45.9	46.3
Purchased Steam	7.6	6.8	13.4	18.8	18.2	18.5
Total	1,895.0	1,371.2	1,445.5	1,433.0	1,456.6	1,460.1

^e estimate.

¹ Includes National Archives and Records Administration, U.S. Department of Commerce, Panama Canal Commission, Tennessee Valley Authority, U.S. Department of Labor, National Science Foundation, Federal Trade Commission, Federal Communications Commission, Environmental Protection Agency, U.S. Department of Housing and Urban Development, Railroad Retirement Board, Commodity Futures Trading Commission, Equal Employment Opportunity Commission, Nuclear Regulatory Commission, U.S. Department of State, U.S. Department of Treasury, Small Business Administration, Office of Personnel Management, Federal Emergency Management Agency and U.S. Information Agency. Environmental Protection Agency data for 1982 and 1988 are estimated, as are U.S. Department of Treasury data for 1982 and 1983, and National Science Foundation data for 1988, 1989, and 1990.

Note: Sum of components may not equal total due to independent rounding. These data include energy consumed at foreign installations and in foreign operations, including aviation and ocean bunkering, primarily by the U.S. Department of Defense. U.S. Government energy use for electricity generation and uranium enrichment is excluded. However, other energy used by U.S. agencies that produce electricity or enrich uranium is included.

Source: U.S. DOE/EIA, *Annual Energy Review 1992*, Table 2.3.

**Table 64. U.S. Government Energy Use by Agency and Source,
Fiscal Years 1975 and 1992
(trillion Btu)**

	Petroleum				Electricity	Natural Gas	Coal and Other ²	Total
	Motor Gasoline	Distillate and Residual Fuel Oils	Other ¹	Total				
1975								
Defense	34.9	326.5	725.5	1,086.8	296.3	119.9	55.1	1,558.1
Energy	1.3	5.2	0.3	6.8	49.2	9.8	19.4	85.2
Postal Service	10.3	4.6	0.7	15.6	40.5	2.5	0.6	59.2
Veterans Affairs	0.6	5.6	*	6.2	16.6	14.6	1.8	39.2
Transportation	1.5	7.8	4.7	14.0	12.9	1.3	0.3	28.5
General Services Admin.	0.2	2.6	0.0	2.7	29.3	4.9	6.1	43.0
NASA	0.4	1.8	1.2	3.4	17.9	3.9	1.2	26.4
Agriculture	4.6	1.4	0.5	6.6	3.4	2.0	*	11.9
Interior	2.6	2.9	0.7	6.1	4.1	2.0	0.1	12.3
Health & Human Services	0.7	2.8	0.1	3.7	3.9	1.6	0.1	9.3
Justice	2.0	0.8	*	2.8	1.9	2.1	0.4	7.1
Other ³	4.3	2.8	0.2	7.3	5.3	1.6	0.4	14.8
Total	63.4	364.7	733.9	1,162.0	481.2	166.2	85.5	1,895.0
1992⁴								
Defense	12.0	214.1	766.9	999.0	116.6	109.0	50.7	1,269.3
Energy	1.2	2.9	0.7	4.9	18.6	12.0	9.0	44.5
Postal Service	9.2	4.3	0.2	13.7	12.5	4.8	0.5	31.5
Veterans Affairs	0.5	1.6	0.0	2.1	8.2	13.6	1.3	25.3
Transportation	1.6	5.6	6.4	13.6	4.2	0.9	0.1	18.8
General Services Admin.	0.0	0.5	0.0	0.5	9.2	2.7	1.7	14.1
NASA	0.2	0.8	1.6	2.5	6.9	2.5	0.3	12.3
Agriculture	4.6	0.5	0.3	5.4	2.0	1.6	0.0	9.0
Interior	1.7	1.1	2.0	4.7	1.5	0.6	0.1	7.0
Health & Human Services	0.0	1.4	0.1	1.5	3.0	2.2	0.1	6.9
Justice	1.8	0.6	0.2	2.6	2.5	2.5	0.4	8.0
Other ⁴	1.9	2.3	1.4	5.6	5.1	2.1	0.6	13.4
Total	34.7	235.8	779.9	1,050.4	190.4	154.4	64.8	1,460.1

⁴ estimate.

* Less than 50 billion Btu's.

¹ Includes aviation gasoline, jet fuel, liquefied petroleum gases, and other.

² Includes purchased steam, coal, and other.

³ Includes U.S. Department of Commerce, Panama Canal Commission, Tennessee Valley Authority, National Science Foundation, U.S. Department of Treasury, and Environmental Protection Agency.

⁴ Includes National Archives and Records Administration, U.S. Department of Commerce, U.S. Department of Labor, U.S. Department of State, Environmental Protection Agency, Federal Communications Commission, Federal Trade Commission, National Science Foundation, Panama Canal Commission, Commodity Futures Trading Commission, Equal Employment Opportunity Commission, Nuclear Regulatory Commission, Office of Personnel Management, U.S. Department of Housing and Urban Development, U.S. Department of Treasury, Tennessee Valley Authority, Railroad Retirement Board, U.S. Information Agency, and Federal Emergency Management Agency.

Note: Sum of components may not equal total due to independent rounding. These data include energy consumed at foreign installations and in foreign operations, including aviation and ocean bunkering, primarily by the Department of Defense. U.S. Government energy use for electricity generation and uranium enrichment is excluded. However, other energy used by U.S. agencies that produce electricity or enrich uranium is included.

Source: U.S. DOE/EIA, *Annual Energy Review 1992, 1985*, Tables 9 and 2.4.

Table 65. Fuel Consumption by Mode of Transportation, 1960-1991

	1960	1965	1970	1975	1980	1985	1990	1991
Class I Railroads								
Locomotives								
Diesel Oil, gals x 10 ⁶	3,472	3,742	3,808	3,736	3,955	3,144	3,134	2,926
Air								
Certified Carriers*								
Jet Fuel, gals x 10 ⁶	1,331	4,650	10,085	9,507	9,096	10,121	12,936	11,637
General Aviation								
Aviation Gasoline, gals x 10 ⁶	242	292	551	412	520	421	353	354
Jet Fuel, gals x 10 ⁶	-	81	208	453	766	691	663	577
Highway								
Gasoline, gals x 10 ⁶								
Passenger Cars	41,169	49,723	67,820	76,447	71,883	69,268	71,989	70,727
Motorcycles	+	69	60	113	204	182	191	184
Diesel & Gasoline, gals x 10 ⁶								
Commercial Buses ¹	618	628	644	553	696	688	725	738
School Buses	209	247	300	342	380	425	472	533
Single-Unit Trucks ²	-	13,848	12,313	17,903	23,594	29,021	32,937	32,547
Other Single-Unit Trucks	-	-	3,968	4,815	5,557	6,735	7,294	7,137
Combination Trucks	-	6,658	7,348	8,654	12,703	15,280	17,469	17,165
Water Transport								
Residual Fuel Oil, gals x 10 ⁶	3,952	3,093	3,774	4,060	8,952	4,590	6,326	6,773
Distillate Fuel Oil, gals x 10 ⁶	787	652	819	1,098	1,478	1,699	2,065	2,046
Gasoline, gals x 10 ⁶	-	-	598	730	1,052	1,053	1,300	1,710
Transit**								
Electricity, kWh x 10 ⁶	2,908	2,584	2,561	2,646	2,446	4,216	4,837	4,850
Gallons of Motor Fuel, gals x 10 ⁶								
Gasoline	192	124	68	8	11	46	34	44
Diesel Oil	208	248	271	365	431	609	651	670
Pipelines, Natural Gas								
cu. ft. x 10 ⁶	347,075	500,524	722,166	582,963	634,622	503,766	659,816	600,891
Non-Highway³ Use of Gasoline x 10⁶	5,332	4,208	4,003	3,642	3,655	4,005	4,078	4,311

* Domestic consumption only.

** Prior to 1984, excludes commuter rail, automated guideway, urban ferryboat, demand response, and most rural and smaller systems. Series not continuous between 1983 and 1984.

+ Included in passenger cars.

¹ Includes intercity and local buses.

² 2-axle, 4-tire single-unit trucks only.

³ Private, commercial, and public non-highway use of gasoline.

Source: See Appendix A, p. A-24.

Table 66. Fuel Consumption by Certificated Air Carriers, 1960-1991
(thousand gallons)

Year	Total Certificated Route Air Carriers	Domestic Operations				International Operations		
		Passenger Cargo Carriers				Total International Operations	Majors ^c	Other
		Total Domestic Operations	Majors ^a	Nationals ^b	Other			
1960	2,519,757	1,954,236	1,806,202	88,032	59,842	565,520	547,040	18,480
1961	3,023,229	2,312,794	2,137,938	103,036	71,568	710,465	684,489	25,976
1962	3,546,333	2,713,384	2,494,627	119,937	15,453	832,949	804,700	28,249
1963	3,941,663	2,957,177	2,744,556	133,836	17,784	984,486	957,479	27,008
1964	4,419,007	3,297,318	3,056,941	151,206	21,084	1,121,689	1,089,709	31,090
1965	5,169,023	3,888,834	3,617,172	176,252	95,390	1,280,189	1,235,878	44,311
1966	6,067,042	4,422,212	4,065,435	231,923	124,853	1,644,831	1,560,971	83,860
1967	7,790,373	5,654,507	5,196,158	318,688	139,597	2,135,866	2,001,193	134,673
1968	9,108,451	6,676,948	6,081,503	449,501	145,688	2,431,502	2,275,996	155,506
1969	10,145,250	8,009,247	7,277,715	561,336	141,064	2,136,003	1,911,084	224,918
1970	10,099,172	7,856,593	7,106,903	618,126	102,577	2,242,579	2,013,883	228,696
1971	10,152,195	7,798,954	7,050,556	619,151	129,247	2,353,241	2,113,200	240,041
1972	10,180,102	7,753,262	7,172,159	649,397	141,064	2,426,839	2,178,294	248,545
1973	10,699,779	8,354,484	7,450,949	727,633	173,958	2,345,294	2,143,420	201,875
1974	9,553,792	7,508,899	6,612,145	720,372	174,264	2,044,893	1,864,685	180,208
1975	9,506,600	7,557,700	6,650,000	725,800	181,900	1,948,900	1,756,700	192,200
1976	9,808,051	8,008,306	7,043,139	766,019	199,149	1,799,745	1,635,266	164,479
1977	10,268,024	8,416,730	7,373,856	828,195	214,679	1,851,294	1,683,513	167,781
1978	10,639,227	8,726,033	7,527,587	918,531	279,915	1,913,194	1,741,918	171,276
1979	11,368,702	9,376,064	7,848,761	1,017,118	510,005	1,992,638	1,830,001	162,637
1980	11,034,038	9,096,023	7,424,555	1,094,678	577,090	1,937,715	1,764,506	173,209
1981	10,587,769	8,555,248	7,263,415	1,119,021	172,812	2,032,520	1,654,395	378,125
1982	10,405,726	8,438,672	6,936,089	1,231,483	271,101	1,967,054	1,589,285	377,769
1983	10,670,863	8,672,574	7,136,444	1,162,543	373,586	1,998,289	1,670,922	327,367
1984	11,910,302	9,623,895	7,439,082	1,702,290	482,523	2,286,407	1,833,195	453,212
1985	12,598,193	10,121,329	7,726,689	2,106,161	288,479	2,476,864	2,052,972	423,892
1986	13,682,296	11,137,330	8,556,771	2,227,520	353,642	2,544,966	2,117,062	427,903
1987	14,480,454	11,586,837	10,210,249	1,044,581	332,008	2,893,616	2,677,289	216,329
1988	15,180,729	11,917,901	10,515,047	1,068,388	334,471	3,212,825	3,020,519	242,035
1989	15,462,435	11,905,141	10,274,147	1,415,557	215,437	3,557,294	3,297,217	260,077
1990	16,412,553	12,935,950	11,279,812	952,097	203,541	3,977,103	3,586,302	390,801
1991	15,581,992	11,637,280	10,510,055	934,472	192,753	3,944,712	3,485,020	459,692

^a 1960-1980, categorized as domestic trunk.

^b 1960-1980, categorized as local service.

^c 1960-1980, categorized as international trunk.

Note: Sum of components may not equal total due to independent rounding.

Source: 1960-1975: CAB, *Handbook of Airline Statistics*, 1977.

1976-1984: CAB, *Fuel Cost and Consumption, Twelve Months Ended December 31, 1984*, and earlier editions.

1985-1991: U.S. DOT/RSPA, Data Administration Division, DAI-20.

**Table 67. Total Motor Vehicle Fuel Consumption and Travel,^a
1960-1991**

Year	Number Registered (thousands)	Vehicle Miles Traveled (millions)	Average Miles Traveled per Vehicle	Average Miles Traveled per Gallon	Fuel Consumed (million gallons)	Average Gallons Consumed per Vehicle
1960	74,475	718,845	9,652	12.42	57,878	777
1961	76,442	737,535	9,648	12.44	59,306	776
1962	79,735	766,852	9,618	12.43	61,697	774
1963	83,500	805,423	9,646	12.48	64,516	773
1964	87,287	846,500	9,698	12.47	67,901	778
1965	91,752	887,640	9,674	12.48	71,104	775
1966	95,703	925,899	9,675	12.40	74,664	780
1967	98,859	964,005	9,751	12.40	77,331	786
1968	102,987	1,015,869	9,864	12.25	82,949	805
1969	107,412	1,061,791	9,885	12.05	88,135	821
1970	111,242	1,109,724	9,976	12.02	92,329	830
1971	116,330	1,178,811	10,133	12.08	97,559	839
1972	122,557	1,259,786	10,279	11.99	105,062	857
1973	130,025	1,313,110	10,099	11.89	110,473	850
1974	134,900	1,280,544	9,493	12.05	106,301	788
1975	137,913	1,327,664	9,627	12.18	108,984	790
1976	143,476	1,402,380	9,774	12.12	115,700	806
1977	147,026	1,467,027	9,978	12.26	119,625	814
1978	153,282	1,544,704	10,077	12.35	125,067	816
1979	157,291	1,529,133	9,722	12.52	122,115	776
1980	161,490	1,527,295	9,458	13.29	114,960	712
1981	164,118	1,552,803	9,462	13.57	114,453	697
1982	165,397	1,595,010	9,644	14.07	113,384	686
1983	169,334	1,652,788	9,761	14.24	116,081	686
1984	171,729	1,720,269	10,017	14.49	118,736	691
1985	177,098	1,774,179	10,018	14.62	121,322	685
1986	181,357	1,834,872	10,117	14.66	125,183	690
1987	183,872	1,921,204	10,449	15.07	127,515	694
1988	188,981	2,025,586	10,718	15.60	129,886	687
1989	191,964	2,096,456	10,936	15.90	131,817	688
1990	193,057	2,144,362	11,107	16.40	130,775	677
1991	192,549	2,172,214	11,281	16.89	128,624	668

^a Includes personal passenger vehicles, buses, and motor trucks.

Source: 1960-1984: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

Table 68. Fuel Consumption and Travel by Passenger Cars and Motorcycles, 1960-1991

Year	Number Registered ^a (thousands)	Vehicle Miles Traveled ^a (millions)	Average Miles Traveled Per Vehicle		Average Miles Traveled Per Gallon		Fuel Consumed (million gallons)		Average Gallons Consumed Per Vehicle	
			Passenger Cars	Motorcycles	Passenger Cars	Motorcycles	Passenger Cars	Motorcycles	Passenger Cars	Motorcycles
1960	62,258	588,083	9,446	*	14.28	*	41,169	*	661	*
1961	63,870	604,557	9,465	*	14.38	*	42,033	*	658	*
1962	66,638	629,097	9,441	*	14.37	*	43,771	*	657	*
1963	69,842	645,371	9,240	*	14.26	*	45,246	*	648	*
1964	72,969	677,613	9,286	*	14.25	*	47,567	*	652	*
1965	76,643	709,300	9,255	*	14.27	*	49,723	*	649	*
1966	79,878	777,480	9,923	1,275	14.11	50	54,942	45	703	25
1967	82,352	811,046	10,060	1,156	14.07	50	57,501	45	715	23
1968	85,694	850,288	10,144	1,043	13.87	50	61,132	44	731	21
1969	89,174	884,705	10,158	1,024	13.62	50	64,803	47	746	20
1970	92,068	919,679	10,272	1,055	13.52	50	67,820	60	760	21
1971	96,062	969,947	10,422	1,079	13.54	50	71,351	72	770	22
1972	100,842	1,025,696	10,521	1,152	13.40	50	76,222	87	785	23
1973	106,356	1,051,175	10,256	1,188	13.30	50	78,668	104	771	24
1974	109,822	1,012,696	9,606	1,096	13.42	50	75,083	109	716	22
1975	111,670	1,039,579	9,690	1,134	13.52	50	76,447	113	716	23
1976	115,122	1,084,218	9,785	1,217	13.53	50	79,693	120	723	24
1977	117,221	1,115,592	9,879	1,287	13.80	50	80,397	127	716	26
1978	121,441	1,153,666	9,835	1,470	14.04	50	81,661	143	701	29
1979	123,851	1,122,277	9,403	1,593	14.41	50	77,303	173	653	32
1980	127,295	1,121,810	9,141	1,794	15.46	50	71,883	204	591	36
1981	128,929	1,141,517	9,186	1,833	15.94	50	70,954	214	576	37
1982	129,456	1,176,166	9,428	1,722	16.65	50	70,062	198	566	34
1983	132,029	1,206,783	9,475	1,568	17.14	50	69,906	175	553	31
1984	133,638	1,233,703	9,558	1,603	17.83	50	68,717	176	536	32
1985	137,308	1,269,651	9,560	1,669	18.20	50	69,268	182	525	33
1986	140,693	1,310,611	9,608	1,786	18.27	50	71,216	188	526	36
1987	142,125	1,364,836	9,878	1,933	19.20	50	70,573	190	514	39
1988	145,836	1,439,319	10,119	2,186	19.95	50	71,949	200	507	44
1989	147,460	1,488,140	10,332	2,339	20.31	50	72,749	207	509	47
1990	147,713	1,522,741	10,548	2,244	21.02	50	71,989	191	502	45
1991	147,133	1,542,846	10,728	2,197	21.68	50	70,727	184	495	44

^a Includes motorcycles.

* Data included with passenger car information.

Source: 1960-1984: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A. 1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

Table 69. Fuel Consumption and Travel by Buses, 1960-1991

Year	Number Registered ^a	Total Vehicle Miles Traveled ^a (millions)	Average Miles Traveled per Vehicle			Average Miles Traveled per Gallon			Total Fuel Consumed (million gallons)			Average Gallons Consumed per Vehicle		
			Commercial	School	All Buses ^a	Commercial	School	All Buses ^a	Commercial	School	All Buses ^a	Commercial	School	All Buses ^a
1960	272,000	4,353	37,789	7,556	16,004	4.65	7.09	5.26	618	209	827	8,132	1,066	3,040
1961	281,000	4,396	37,846	7,543	15,661	4.67	7.05	5.30	610	220	830	8,112	1,071	2,957
1962	288,000	4,466	36,475	7,678	15,507	4.68	7.09	5.34	610	227	837	7,791	1,082	2,906
1963	298,000	4,483	34,562	7,612	15,049	4.69	7.08	5.35	606	232	838	7,372	1,076	2,813
1964	305,000	4,616	35,140	7,727	15,115	4.65	7.12	5.34	628	242	864	7,558	1,085	2,829
1965	314,000	4,684	34,365	7,689	14,903	4.65	7.14	5.35	628	247	875	7,388	1,077	2,784
1966	322,170	4,258	35,598	7,725	14,055	4.72	7.12	5.42	637	259	835	7,538	1,085	2,593
1967	337,920	4,627	33,600	7,543	13,693	4.68	7.08	5.38	646	264	860	7,178	1,065	2,545
1968	351,758	4,925	33,828	7,387	14,001	4.63	6.99	5.43	655	277	907	7,310	1,056	2,578
1969	364,213	4,820	33,300	7,409	13,234	4.58	7.00	5.42	657	290	889	7,276	1,058	2,442
1970	377,562	4,544	32,591	7,274	12,035	4.57	7.00	5.54	644	300	820	7,132	1,039	2,172
1971	397,075	4,792	31,949	7,198	12,068	4.57	7.00	5.68	631	316	844	6,988	1,028	2,125
1972	406,866	5,348	30,968	7,414	13,144	4.39	7.37	5.79	561	320	924	6,318	1,006	2,270
1973	424,920	5,792	28,469	7,178	13,631	4.90	7.37	5.86	520	327	988	5,810	973	2,326
1974	447,048	5,684	28,968	6,865	12,715	4.97	7.36	5.89	525	333	965	5,827	933	2,159
1975	462,156	6,055	28,320	6,788	13,102	4.79	7.31	5.75	553	342	1,053	5,896	929	2,279
1976	478,339	6,258	29,936	7,502	13,083	5.05	7.34	5.98	574	390	1,046	5,928	1,022	2,188
1977	490,761	5,823	30,011	7,491	11,865	5.04	7.35	5.98	583	401	974	5,955	1,019	1,984
1978	505,354	5,885	30,377	7,500	11,645	5.02	7.35	5.95	615	407	989	6,051	1,020	1,957
1979	526,765	5,947	29,691	7,179	11,290	5.06	7.36	5.97	618	405	996	5,872	976	1,891
1980	528,789	6,059	32,765	7,592	11,458	5.03	7.64	5.95	696	380	1,018	6,516	994	1,926
1981	543,894	6,241	32,996	6,780	11,475	4.98	7.65	5.92	711	387	1,054	6,626	886	1,938
1982	559,200	5,823	31,524	6,870	10,413	4.96	7.68	5.93	721	399	982	6,356	894	1,756
1983	582,884	5,199	32,795	6,532	8,919	4.95	7.70	5.92	737	402	878	6,625	848	1,507
1984	583,671	4,640	34,224	10,000	7,950	4.21	7.72	5.85	679	440	793	8,122	1,295	1,359
1985	593,485	4,876	36,859	10,145	8,216	4.15	7.74	5.84	688	452	835	8,879	1,311	1,407
1986	593,728	5,073	36,659	10,571	8,544	4.12	7.76	5.84	708	476	867	9,646	1,362	1,463
1987	602,055	5,318	36,818	10,833	8,833	4.16	7.78	5.89	721	501	903	8,857	1,392	1,500
1988	615,669	5,465	36,680	11,081	8,877	4.18	7.80	5.94	710	526	920	8,778	1,421	1,494
1989	625,040	5,659	37,597	10,526	9,054	4.37	8.03	5.96	718	498	949	9,354	1,311	1,518
1990	626,987	5,719	38,499	10,000	9,121	4.38	8.05	6.39	723	472	895	9,591	1,242	1,428
1991	631,279	5,743	39,038	12,286	9,097	4.39	8.06	6.64	738	533	864	9,939	1,524	1,369

^a Includes commercial, school and non-revenue buses.

Source: 1960-1965: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1966-1979: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

1980-1984: *Ibid.*, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

1984-1991: Commercial/School Bus: Transportation Policy Associates, personal communication.

Table 70. Fuel Consumption and Travel by Trucks, 1960-1991

Year	Number Registered (thousands)	Vehicle Miles Traveled (millions)	Average Miles Traveled per Vehicle			Average Miles Traveled per Gallon			Total Fuel Consumed (million gallons)			Average Gallons of Fuel Consumed per Vehicle		
			Single-Unit*	Other Single Unit	Combination	Single-Unit*	Other Single Unit	Combination	Single-Unit*	Other Single Unit	Combination	Single-Unit*	Other Single Unit	Combination
1960	11,945	126,409	-	-	-	-	-	-	-	-	-	-	-	-
1961	12,291	128,582	-	-	-	-	-	-	-	-	-	-	-	-
1962	12,809	133,289	-	-	-	-	-	-	-	-	-	-	-	-
1963	13,360	155,569	9,938	-	42,232	10.18	-	4.90	12,348	-	6,084	976	-	8,618
1964	14,013	164,271	10,072	-	41,409	10.13	-	4.87	13,199	-	6,271	994	-	8,497
1965	14,795	173,656	10,077	-	41,292	10.19	-	4.88	13,848	-	6,658	989	-	8,460
1966	15,503	143,891	8,077	7,232	35,987	9.70	6.86	4.78	9,425	3,598	5,819	833	1,054	7,535
1967	16,169	148,332	7,877	7,279	37,362	9.83	6.88	4.79	9,533	3,687	6,104	801	1,058	7,806
1968	16,942	160,656	8,376	6,876	38,152	9.86	6.85	4.77	10,432	3,851	6,854	849	1,004	7,998
1969	17,874	172,266	8,355	7,398	38,460	9.82	6.78	4.76	11,408	3,919	7,069	851	1,091	8,074
1970	18,797	185,501	8,676	7,356	38,819	10.01	6.82	4.78	12,313	3,968	7,348	866	1,078	8,119
1971	19,871	204,072	9,082	7,687	40,494	10.22	6.88	4.90	13,484	4,212	7,595	888	1,117	8,264
1972	21,308	228,742	9,534	8,018	42,339	10.34	6.89	5.01	15,150	4,560	8,120	922	1,164	8,446
1973	23,244	256,143	9,779	8,148	44,336	10.51	6.93	5.06	16,828	4,859	9,026	931	1,176	8,772
1974	24,630	262,164	9,452	7,942	42,366	10.97	7.14	5.22	16,657	4,687	8,800	862	1,113	8,111
1975	25,781	282,030	9,829	8,178	41,321	11.21	7.19	5.40	17,903	4,815	9,654	877	1,138	7,653
1976	27,876	311,904	10,127	8,365	40,558	11.20	7.08	5.21	20,164	5,140	9,536	904	1,182	7,785
1977	29,314	345,612	10,607	8,840	44,919	11.44	7.08	5.22	21,895	5,559	10,673	927	1,249	8,610
1978	31,336	385,153	10,968	9,461	46,949	11.62	7.00	5.20	24,055	6,036	12,113	944	1,352	9,028
1979	32,914	400,909	10,802	9,325	48,322	11.80	6.96	5.21	24,742	5,557	12,864	916	1,340	9,279
1980	33,667	399,426	10,437	9,103	48,472	12.33	7.16	5.41	23,594	5,557	12,703	846	1,271	8,966
1981	34,644	405,045	10,244	8,882	54,816	12.51	7.10	5.33	23,697	5,574	12,960	819	1,251	10,276
1982	35,382	413,021	10,276	9,297	52,689	12.84	7.10	5.28	23,845	5,661	12,636	800	1,309	9,987
1983	36,723	440,806	10,497	10,235	53,491	12.82	7.10	5.19	25,556	6,118	13,447	819	1,455	10,312
1984	37,507	481,926	11,150	11,465	57,730	12.93	7.07	5.23	27,687	6,582	14,781	862	1,621	11,030
1985	39,196	499,652	11,115	11,962	56,725	12.86	6.98	5.21	29,021	6,735	15,280	857	1,715	10,889
1986	40,069	519,188	11,173	12,547	58,497	12.85	6.97	5.21	30,265	6,929	15,716	869	1,800	11,234
1987	41,144	551,050	11,591	12,755	60,634	12.88	6.99	5.22	32,266	7,091	16,493	900	1,826	11,620
1988	42,529	580,802	11,846	12,948	61,066	13.41	7.06	5.27	32,760	7,260	17,101	883	1,834	11,584
1989	43,610	602,657	11,982	12,910	59,995	13.77	7.15	5.45	33,005	7,412	17,495	870	1,807	11,008
1990	44,718	615,902	11,993	12,595	59,807	14.15	7.33	5.52	32,937	7,294	17,469	847	1,719	10,841
1991	44,785	623,625	12,147	12,656	60,429	14.53	7.54	5.65	32,547	7,137	17,165	836	1,679	10,699

* 2-axle, 4-tire trucks.

Source: 1960-1984: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

**Table 71. Motor Fuel and Total Energy Consumption
by the U.S. Transit Industry,
1955-1991***

Year	Kilowatt Hours Consumed (millions)	Gallons of Motor Fuel Used (thousands)	
		Gasoline	Diesel
1955	3,530	246,000	172,600
1960	2,908	191,900	208,100
1961	2,851	161,600	217,500
1962	2,786	144,500	229,000
1963	2,642	138,400	235,300
1964	2,597	129,300	242,200
1965	2,584	124,200	248,400
1966	2,467	109,600	256,000
1967	2,531	90,800	270,300
1968	2,586	77,900	274,200
1969	2,618	71,600	273,800
1970	2,561	68,200	270,600
1971	2,556	29,400	256,800
1972	2,428	19,647	253,250
1973	2,331	12,333	282,620
1974	2,630	7,457	316,360
1975	2,646	7,576	365,060
1976	2,576	6,163	389,187
1977	2,303	9,273	402,842
1978	2,223	9,331	422,017
1979	2,473	8,973	423,212
1980	2,446	11,400	431,400
1981	2,655	13,950	445,950
1982	2,722	11,670	455,590
1983	2,930	9,460	450,260
1984	4,238	49,907	600,364
1985	4,216	45,704	608,738
1986	4,489	38,156	640,044
1987	4,656	34,220	630,273
1988	4,785	40,055	640,069
1989	4,912	39,389	638,016
1990	4,837	33,906	651,030
1991 ^P	4,850	44,369	670,284

^P preliminary.

* Prior to 1984, excludes commuter rail, automated guideway, urban ferryboat, demand response, and most rural and smaller systems. Series not continuous between 1983 and 1984.

Source: American Public Transit Association, *Transit Fact Book*, 1992, Tables 54 and 55, and similar table in earlier editions.

Table 72. Average Retail Price of Transportation Fuel, 1960-1992
(cents per gallon)

Year	Aviation Fuel		Highway Fuel			Railroad Fuel	
	Aviation Gasoline	Jet Fuel Kerosene	Motor Gasoline			Truck No. 2 Diesel	Diesel
			Leaded Regular	Unleaded Premium	Unleaded Regular		
1960	-	-	31.1	-	-	-	9.0
1961	-	-	30.8	-	-	-	9.3
1962	-	-	30.6	-	-	-	-
1963	-	-	30.4	-	-	-	-
1964	-	-	30.4	-	-	-	8.8
1965	-	-	31.2	-	-	-	9.1
1966	-	-	32.1	-	-	-	9.2
1967	-	-	33.2	-	-	-	9.6
1968	-	-	33.7	-	-	-	9.9
1969	-	-	34.8	-	-	-	10.2
1970	-	-	35.7	-	-	-	10.7
1971	-	-	36.4	-	-	-	10.9
1972	-	-	36.1	-	-	-	11.0
1973	-	-	38.8	-	-	-	13.5
1974	-	-	53.2	-	-	-	26.6
1975	41.1	29.8	56.7	-	-	-	30.0
1976	43.1	31.2	59.0	-	61.4	34.7	32.4
1977	47.7	35.8	62.2	-	65.6	39.3	36.4
1978	51.6	38.7	62.6	-	67.0	37.7	37.9
1979	68.9	54.7	85.7	-	90.3	58.5	57.6
1980	108.4	86.8	119.1	128.1	124.5	81.8	83.0
1981	130.3	102.4	131.1	147.0*	137.8	99.5	100.2
1982	131.2	96.3	122.2	141.5	129.6	94.2	95.4
1983	125.5	87.8	115.7	138.3	124.1	82.6	83.1
1984	123.4	84.2	112.9	136.6	121.2	82.3	82.6
1985	120.1	79.6	111.5	134.0	120.2	78.9	78.3
1986	101.1	52.9	85.7	108.5	92.7	47.8	49.2
1987	90.7	54.3	89.7	109.3	94.8	55.1	53.8
1988	89.1	51.3	89.9	110.7	94.6	50.0	49.2
1989	99.5	59.2	99.8	119.7	102.1	58.5	56.3
1990	112.0	76.6	114.9	134.9	116.4	72.5	69.2
1991	104.7	65.2	-	132.1	114.0	64.8	67.2
1992	102.7	61.0	-	131.6	112.7	61.8	-

* Based on September through December data only.

Source: Railroad Fuel: Association of American Railroads, *Railroad Facts*, 1992, p. 60, and similar table in earlier edition.

Other Data: U.S. DOE/EIA, *Monthly Energy Review*, April 1993, Tables 9.4/9.7 and similar tables in earlier editions.

Ibid., *Annual Energy Review*, June 1992, Table 5.22 (motor gasoline, 1960-1974).

**Table 73. Gasoline Cost per Mile at Various Gasoline Prices, 1991
(cents)**

Vehicle	Avg. MPG.	Price per Gallon						
		1.00	1.10	1.20	1.30	1.40	1.50	1.60
Subcompact	26.2	3.81	4.19	4.58	4.96	5.34	5.72	6.10
Compact	22.9	4.37	4.81	5.25	5.69	6.12	6.56	7.00
Intermediate	19.9	5.03	5.54	6.04	6.54	7.04	7.55	8.05
Full-Size	18.0	5.56	6.11	6.67	7.23	7.78	8.34	8.89
Compact Pick-Up	21.7	4.61	5.07	5.53	5.99	6.46	6.92	7.38
Full-Size Pick-Up	14.5	6.90	7.60	8.29	8.98	9.67	10.36	11.05
Minivan	17.5	5.70	6.27	6.84	7.41	7.98	8.55	9.12
Full-Size Van	11.2	8.90	9.80	10.69	11.58	12.47	13.36	14.25

Source: U.S DOT/FHWA, *Cost of Owning and Operating Automobiles, Vans, and Light Trucks, 1991*.

**Table 74. Price Trend of Gasoline vs. Other Consumer Goods and Services,
1955-1992**

Year	Retail Price of Regular Grade Gasoline (Cents Per Gallon)			Price Indexes of Motor Fuel and Other Consumer Items (Index: 1982-84 = 100)					
	Service Station Price Excl. Taxes	State & Federal Taxes	Service Station Price Incl. Taxes	All Items	Food	Shelter	Apparel and Upkeep	Motor Fuel	Medical Care
1955	21.42	7.65	29.07	26.8	27.8	22.7	42.9	22.1	18.2
1960	20.99	10.14	31.13	29.6	30.0	25.2	45.7	24.4	22.3
1961	20.53	10.23	30.76	29.9	30.4	25.4	46.1	24.1	22.9
1962	20.36	10.28	30.64	30.2	30.6	25.8	46.3	24.3	23.5
1963	20.11	10.31	30.42	30.6	31.1	26.1	46.9	24.2	24.1
1964	19.98	10.37	30.35	31.0	31.5	26.5	47.3	24.1	24.6
1965	20.70	10.45	31.15	31.5	32.2	27.0	47.8	25.1	25.2
1966	21.57	10.51	32.08	32.4	33.8	27.8	49.0	25.6	26.3
1967	22.55	10.61	33.16	33.4	34.1	28.8	51.0	26.4	28.2
1968	22.93	10.78	33.71	34.8	35.3	30.1	53.7	26.8	29.9
1969	23.85	10.99	34.84	36.7	37.1	32.6	56.8	27.6	31.9
1970	24.55	11.14	36.69	38.8	39.2	35.5	59.2	27.9	34.0
1971	25.20	11.23	36.43	40.5	40.4	37.0	61.1	28.1	36.1
1972	24.46	11.67	36.13	41.8	42.1	38.7	62.3	28.4	37.3
1973	26.88	11.94	38.83	44.4	48.2	40.5	64.6	31.2	38.8
1974	41.20	12.00	53.20	49.3	55.1	44.4	69.4	42.2	42.4
1975	44.93	11.77	56.70	53.8	59.8	48.8	72.5	45.1	47.5
1976	47.44	12.03	59.47	56.9	61.6	51.5	75.2	47.0	52.0
1977	49.83	12.37	62.20	60.6	65.5	54.9	78.6	49.7	57.0
1978	49.98	12.62	62.60	65.2	72.0	60.5	81.4	51.8	61.8
1979	72.24	13.46	85.70	72.6	79.9	68.9	84.9	70.1	67.5
1980	107.35	14.37	119.10	82.4	86.8	81.0	90.9	97.4	74.9
1981	122.33 ^c	12.97 ^c	131.10	90.9	93.6	90.5	95.3	108.5	82.9
1982	108.11 ^c	14.09 ^c	112.20	96.5	97.4	96.9	97.8	102.8	92.5
1983	95.36	20.34 ^c	115.70	99.6	99.4	99.1	100.2	99.4	100.6
1984	92.06	20.84	112.90	103.9	103.2	104.0	102.1	97.9	106.8
1985	89.64	21.86	111.50	107.6	105.6	109.8	105.0	98.7	113.5
1986	63.63	22.07	85.70	109.6	109.0	115.8	105.9	77.1	122.0
1987	66.33	23.37	89.70	113.6	113.5	121.3	110.6	80.2	130.1
1988	65.85	24.10	89.95	118.3	118.2	127.1	115.4	80.9	138.6
1989	74.87	24.80	99.67	124.0	125.1	132.8	118.6	88.5	149.3
1990	89.00	25.90	114.90	130.7	132.4	140.0	124.1	101.2	162.8
1991	81.20	32.80	114.00*	136.2	136.3	146.3	128.7	99.4	177.0
1992	78.80	33.90	112.70*	140.3	137.9	151.2	131.9	99.0	190.1

^c estimate.

* Price of regular unleaded gasoline. Regular leaded prices are no longer available.

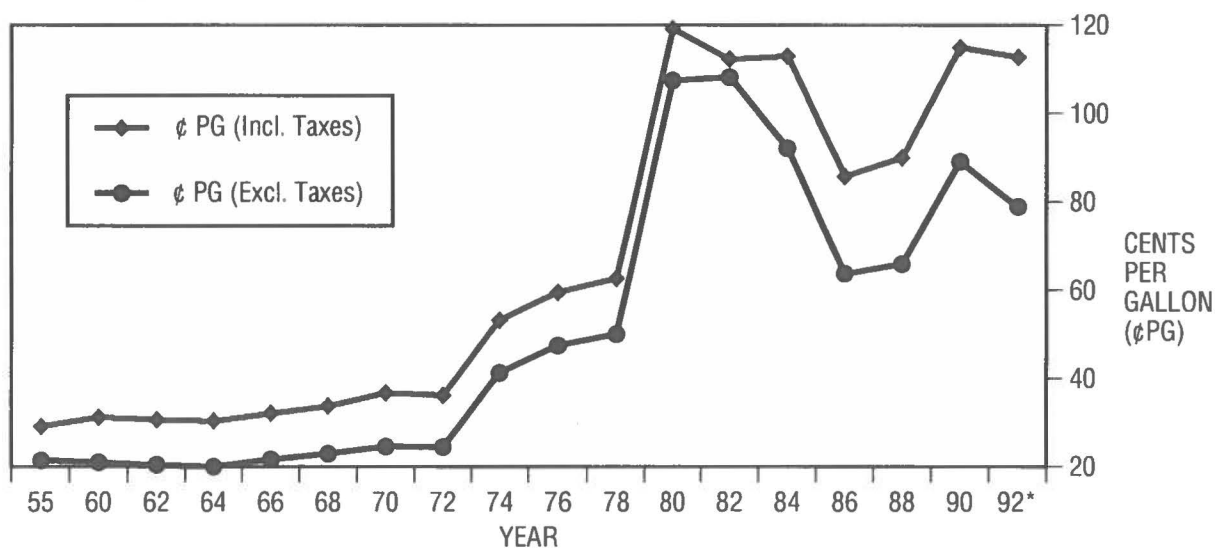
Source: Price of regular grade gasoline: American Petroleum Institute, *Basic Petroleum Data Book*, Section VI, Table 4/4a/5a.

Price Indexes of Motor Fuel/Consumer Items: Council of Economic Advisors, *Economic Report of the President*, January 1993, Tables B-56, 57.

Table 75. Average Fuel Efficiency of U.S. Passenger Cars, 1955-1993

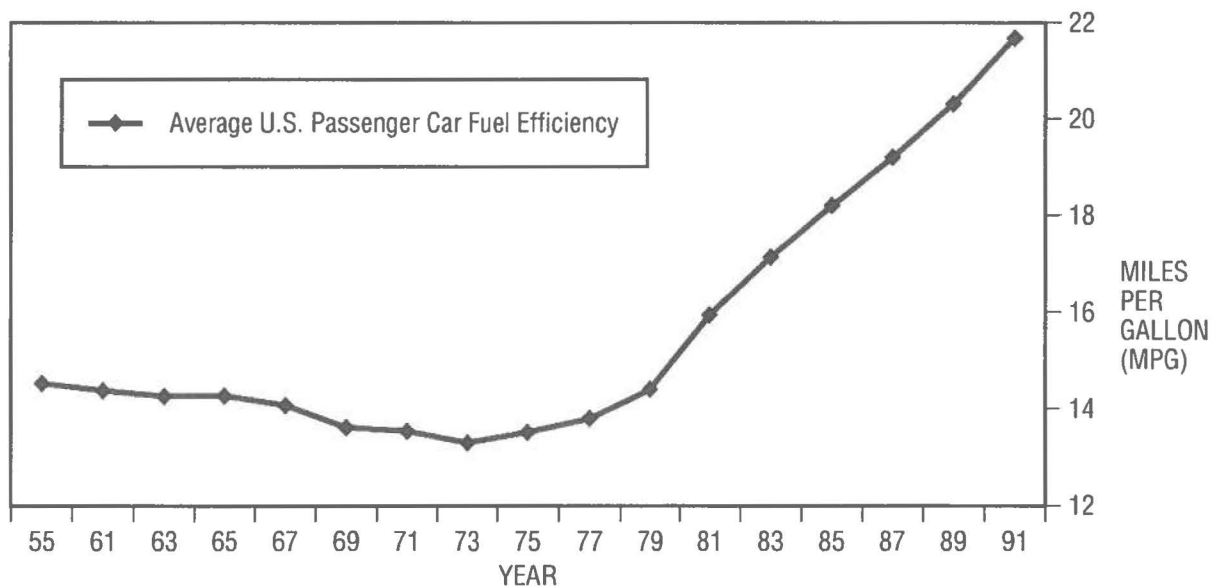
Year	Average U.S. Passenger Car Fuel Efficiency, (mpg) (Calendar Year Basis)	New Car Fuel Efficiency, (mpg) ¹ (Model Year Basis)	
		Domestic Cars	Domestic and Imported Cars
1955	14.53	16.0	16.1
1960	14.28	15.5	16.1
1961	14.38	-	-
1962	14.37	-	-
1963	14.26	-	-
1964	14.25	-	-
1965	14.27	15.4	15.9
1966	14.11	15.0	-
1967	14.07	14.6	-
1968	13.87	14.2	15.0
1969	13.62	14.1	-
1970	13.52	14.1	15.2
1971	13.54	13.7	14.7
1972	13.40	13.6	14.4
1973	13.30	13.3	14.2
1974	13.42	12.8	13.7
1975	13.52	15.1	16.2
1976	13.53	16.5	17.4
1977	13.80	17.6	18.8
1978	14.04	18.7	19.9
1979	14.41	19.3	20.3
1980	15.46	22.6	24.3
1981	15.94	24.2	25.9
1982	16.65	25.0	26.6
1983	17.14	24.4	26.4
1984	17.83	25.5	26.9
1985	18.20	26.3	27.6
1986	18.27	26.9	28.2
1987	19.20	27.0	28.5
1988	19.87	27.4	28.8
1989	20.31	27.2	28.4
1990	21.02	26.9	28.0
1991	21.68	27.3	28.3
1992	-	27.0	27.9
1993	-	27.7	28.3

¹ 55% city, 45% highway miles sales weighted harmonic average.
Source: Average Passenger Car Fuel Efficiency: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table VM-1.
New Car Fuel Efficiency:
1955-1977: U.S. DOT/NHTSA, Motor Vehicle Requirements Division, NRM-21.
1978-1990: *Ibid.*, EPA Final Fuel Economy Calculations for NHTSA.
1991-1993: *Ibid.*, Manufacturer's preliminary estimates for NHTSA.



* Price of regular unleaded gasoline. Regular leaded prices are no longer available.
Source: See Table 74.

Figure 48. Price Trend of Regular Grade Gasoline , 1955-1992



Source: See Table 75.

Figure 49. Average Fuel Efficiency of U.S. Passenger Cars, 1955-1991

Part 2. Energy Intensiveness

This section presents the energy intensiveness of each transportation mode utilizing the number of miles traveled and the amount of fuel consumed for the years 1960-1991.

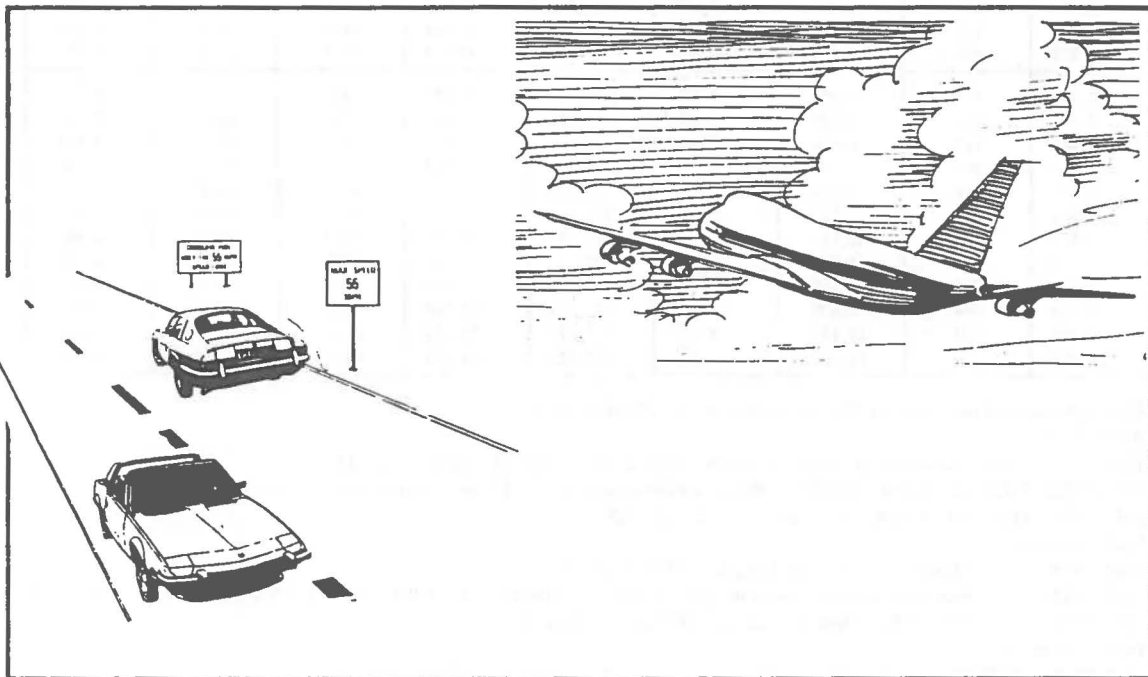


Table 76. Energy Intensiveness of Certificated Air Carriers (All Services), 1960-1991

Year	Aircraft Miles (millions)		Fuel Consumed (million gallons)		Passenger-Miles (millions)		Passenger Load Factor (%)		Btu/Passenger-Mile	
	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations
1960	793	182	1,954	566	31,099	8,951	58.5	62.2	8,482	8,536
1961	833	184	2,313	710	31,617	10,174	55.4	55.6	9,876	9,421
1962	877	197	2,713	833	34,298	11,972	52.6	54.1	10,679	9,393
1963	926	218	2,957	984	39,016	14,201	53.2	52.7	10,232	9,354
1964	998	241	3,297	1,122	45,046	16,753	54.8	55.6	9,880	9,041
1965	1,134	284	3,889	1,280	53,226	19,990	54.7	56.8	9,863	8,644
1966	1,231	366	4,422	1,645	63,085	25,058	57.9	58.2	9,463	8,862
1967	1,538	477	5,655	2,136	79,522	32,256	56.5	56.6	9,600	8,940
1968	1,779	542	6,677	2,432	100,451	37,926	52.4	53.4	8,973	8,657
1969	2,080	474	8,009	2,136	109,541	33,163	49.3	52.2	9,870	8,695
1970	2,068	475	7,857	2,243	108,442	39,695	49.8	51.1	9,781	7,628
1971	1,934	379	7,799	2,353	109,804	39,640	41.0	46.3	9,589	8,014
1972	1,954	378	7,753	2,427	121,820	43,420	44.3	49.2	8,592	7,546
1973	2,018	379	8,354	2,345	130,720	43,900	31.6	37.5	8,628	7,211
1974	1,869	339	7,509	2,045	133,720	40,460	55.5	38.3	7,581	6,823
1975	1,885	310	7,558	1,949	136,000	37,320	54.6	52.3	7,502	7,050
1976	1,995	305	8,008	1,800	151,370	40,460	55.6	55.6	7,142	6,006
1977	2,078	319	8,417	1,851	163,220	42,860	55.8	56.4	6,962	5,830
1978	2,249	359	8,726	1,913	187,812	49,185	61.0	63.7	6,272	5,251
1979	2,471	388	9,376	1,993	208,091	57,018	62.8	63.8	6,059	4,719
1980	2,523	401	9,096	1,938	200,087	63,354	58.0	62.8	6,089	4,460
1981	2,442	356	8,555	2,033	201,438	58,629	57.4	63.7	5,733	4,681
1982	2,443	362	8,439	1,967	213,631	58,804	58.5	61.4	5,333	4,516
1983	2,553	363	8,673	1,998	232,165	61,823	59.9	64.3	5,043	4,363
1984	2,875	389	9,624	2,286	250,687	68,817	57.7	66.2	5,183	4,485
1985	3,046	415	10,121	2,477	277,836	73,237	60.7	64.6	4,918	4,566
1986	3,421	451	11,137	2,545	307,885	71,038	60.7	58.9	4,883	4,836
1987	3,652	530	11,587	2,894	329,215	88,616	61.6	65.6	4,751	4,408
1988	3,738	615	11,918	3,213	334,291	103,358	61.4	67.1	4,813	4,197
1989	3,748	694	11,905	3,557	335,214	112,266	62.3	66.6	4,794	4,277
1990	3,963	760	12,936	3,977	345,873	126,363	60.4	69.1	5,049	4,249
1991	3,854	807	11,637	3,945	338,085	125,211	61.2	67.3	4,647	4,253

Note: Heat equivalent factor used for Btu conversion is 135,000 Btu/gallon.

Source: Aircraft Miles:

1960-1972: CAB, *Handbook of Airline Statistics*, 1969 & 1973, Part III, Tables 2 and 13.

1973-1982: CAB, *Air Carrier Traffic Statistics*, annual issues, pp. 5, 15, and similar tables in earlier editions.

1983-1991: U.S. DOT/RSPA, *Ibid.*, annual issues, pp. 2,3.

Fuel Consumed:

1960-1975: CAB, *Handbook of Airline Statistics*, 1977, Table 2.

1976-1984: CAB, *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1984*, Tables 1,2,3,4,6,7, and similar tables in earlier editions.

1985-1991: U.S. DOT/RSPA, Data Administration Division, DAI-20.

Passenger Miles:

1960-1972: CAB, *Handbook of Airline Statistics*, 1969 & 1973, Part III, Tables 2 and 13.

1973-1982: *Ibid.*, *Air Carrier Traffic Statistics*, annual issues, pp. 4,5, and similar tables in earlier editions.

1983-1991: U.S. DOT/RSPA, *Ibid.*, annual issues, pp. 2,3.

Passenger Load Factor:

1960-1972: CAB, *Handbook of Airline Statistics*, 1969 & 1973, Part III, Tables 2 and 13.

1973-1982: *Ibid.*, *Air Carrier Traffic Statistics*, annual issues, pp. 5,15, and similar tables in earlier editions.

1983-1991: U.S. DOT/RSPA, *Ibid.*, annual issues, pp. 2,3.

Table 77. Energy Intensiveness of General Aviation, 1960-1991

Year	Intercity Passenger-Miles (millions)	Fuel Consumption (million gallons)		Btu/Passenger-Mile
		AVGAS	Jet Fuel	
1960	2,300	242	*	12,646
1961	2,300	253	*	13,221
1962	2,700	241	20	11,728
1963	3,400	250	32	10,108
1964	3,700	262	41	10,007
1965	4,400	292	56	9,694
1966	5,700	375	83	9,873
1967	7,000	396	100	8,728
1968	8,200	495	115	9,149
1969	8,800	522	168	9,907
1970	9,100	551	208	10,363
1971	9,200	508	226	9,953
1972	10,000	584	245	10,327
1973	10,700	411	304	8,452
1974	11,200	443	357	9,057
1975	11,400	412	453	9,709
1976	12,100	432	495	9,814
1977	12,800	456	536	9,935
1978	14,100	518	763	11,723
1979	15,500	570	736	10,830
1980	14,700	520	766	11,286
1981	14,600	489	759	11,044
1982	13,100	448	887	13,252
1983	12,700	428	613	10,566
1984	13,000	462	739	11,946
1985	12,300	421	691	11,697
1986	12,400	409	732	11,934
1987	12,100	402	673	11,501
1988	12,600	398	746	11,789
1989	13,100	343	688	10,237
1990	13,000	353	663	10,148
1991	12,600	354	577	9,194

* Prior to 1962, jet fuel was included with aviation gasoline.

Note: The heat equivalent factors used in Btu conversion are:

AVGAS = 120,190 Btu/gal.

Jet Fuel (kerosene) = 135,000 Btu/gal.

Source: Passenger-Miles Flown: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 47, and similar table in earlier editions by TPA.

Fuel Consumed: 1960-1977: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.

1978-1991: *Ibid.*, *General Aviation Activity and Avionics Survey*, annual issues, Table 5-1.

Table 78. Energy Intensiveness of Passenger Cars and Motorcycles, 1960-1991

Year	Vehicle-Miles (millions)		Passenger-Miles (millions)		Fuel Consumed (million gallons)		BTU/Passenger-Mile	
	Passenger Cars	Motorcycles	Passenger Cars	Motorcycles	Passenger Cars	Motorcycles	Passenger Cars	Motorcycles
1960	588,083	-	1,293,783	-	41,169	-	3,978	-
1961	604,557	-	1,317,934	-	42,033	-	3,987	-
1962	629,097	-	1,358,850	-	43,771	-	4,026	-
1963	645,371	-	1,381,094	-	45,246	-	4,095	-
1964	677,613	-	1,436,540	-	47,567	-	3,937	-
1965	709,300	-	1,489,530	-	49,723	-	3,992	-
1966	775,245	2,235	1,612,510	2,682	54,942	45	3,854	2,097
1967	808,788	2,258	1,666,103	2,732	57,501	45	4,122	2,059
1968	848,109	2,179	1,730,142	2,658	61,132	44	4,154	2,069
1969	882,334	2,371	1,782,315	2,916	64,803	47	4,287	2,015
1970	916,700	2,979	1,833,400	3,694	67,820	60	4,418	2,030
1971	966,340	3,607	1,913,353	4,473	71,351	72	4,431	2,012
1972	1,021,365	4,331	2,001,875	5,370	76,222	87	4,455	2,025
1973	1,045,981	5,194	2,029,203	6,493	78,668	104	4,695	2,002
1974	1,007,251	5,442	1,933,922	6,857	75,083	109	5,085	1,987
1975	1,033,950	5,629	1,964,505	7,149	76,447	113	4,777	1,976
1976	1,078,215	6,003	2,027,044	7,684	79,693	120	4,914	1,952
1977	1,109,243	6,349	2,063,192	8,127	80,397	127	4,871	1,953
1978	1,146,508	7,158	2,109,575	9,162	81,661	143	4,839	1,951
1979	1,113,640	8,637	2,026,825	11,142	77,303	173	4,767	1,941
1980	1,111,596	10,214	2,000,873	13,278	71,883	204	4,491	1,920
1981	1,130,827	10,690	2,012,872	14,004	70,954	214	4,406	1,910
1982	1,166,256	9,910	2,052,611	13,801	70,062	198	4,267	1,793
1983	1,198,023	8,760	2,084,560	11,563	69,906	175	4,192	1,892
1984	1,224,919	8,784	2,106,861	13,026	68,717	176	4,077	1,689
1985	1,260,565	9,086	2,142,961	12,084	69,268	182	4,040	1,883
1986	1,301,214	9,397	2,186,040	12,592	71,216	188	4,072	1,866
1987	1,355,330	9,506	2,249,848	12,833	70,573	190	3,921	1,851
1988	1,429,579	10,024	2,344,570	13,633	71,949	200	3,836	1,834
1989	1,477,769	10,371	2,579,208	14,208	72,749	207	3,822	1,821
1990	1,513,184	9,557	2,451,358	13,093	71,989	191	3,671	1,823
1991	1,533,668	9,178	2,484,542	12,574	70,727	184	3,558	1,829

The heat equivalent factor used for Btu conversion is 125,000 Btu/gal.

Source: 1960-1984: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

Table 79. Energy Intensiveness of Trucks, 1960-1991

Year	Vehicle-Miles (millions)			Passenger-Miles (millions)			Fuel Consumed (million gallons)			Btu/Passenger Mile		
	Single-Unit*	Other Single-Unit	Combination	Single-Unit*	Other Single-Unit	Combination	Single-Unit*	Other Single-Unit	Combination	Single-Unit*	Other Single-Unit	Combination
1960	97,930	-	28,479	156,688	-	28,479	-	-	-	-	-	-
1961	99,588	-	28,994	159,341	-	28,994	-	-	-	-	-	-
1962	104,104	-	29,185	166,566	-	29,185	-	-	-	-	-	-
1963	125,753	-	29,816	199,947	-	29,816	12,348	-	6,084	7,720	-	28,302
1964	133,711	-	30,560	212,600	-	30,560	13,199	-	6,271	7,760	-	28,462
1965	141,159	-	32,497	223,031	-	32,497	13,848	-	6,658	7,761	-	28,417
1966	91,414	24,686	27,791	144,434	24,686	27,791	9,425	3,598	5,819	8,157	20,216	29,042
1967	93,740	25,378	29,214	147,172	25,378	29,214	9,533	3,687	6,104	8,097	20,151	28,980
1968	102,876	26,374	31,406	161,515	26,374	31,406	10,432	3,851	6,854	8,074	20,252	30,270
1969	112,011	26,581	33,674	174,737	26,581	33,674	11,408	3,919	7,069	8,161	20,449	29,117
1970	123,286	27,081	35,134	192,326	27,081	35,134	12,313	3,968	7,348	8,003	20,323	29,008
1971	137,870	28,985	37,217	213,699	28,985	37,217	13,484	4,212	7,595	7,887	20,155	28,305
1972	156,622	31,414	40,706	242,764	31,414	40,706	15,150	4,560	8,120	7,801	20,133	27,668
1973	176,833	33,661	45,649	274,091	33,661	45,649	16,828	4,859	9,026	7,674	20,021	27,425
1974	182,757	33,441	45,966	281,446	33,441	45,966	16,657	4,687	8,800	7,398	19,440	26,554
1975	200,700	34,606	46,724	309,078	34,606	46,724	17,903	4,815	9,654	7,240	19,298	28,658
1976	225,834	36,930	49,680	345,526	36,930	49,680	20,164	5,140	9,536	7,295	19,591	26,623
1977	250,591	39,339	55,682	383,404	39,339	55,682	21,895	5,559	10,673	7,138	19,600	26,586
1978	279,414	42,747	62,992	424,709	42,747	62,992	24,055	6,036	12,113	7,080	17,650	26,671
1979	291,905	42,012	66,992	443,696	42,012	66,992	24,742	5,557	12,864	6,970	18,346	26,634
1980	290,935	39,813	68,678	439,312	39,813	68,678	23,594	5,557	12,703	6,713	19,359	25,655
1981	296,343	39,568	69,134	447,478	39,568	69,734	23,697	5,574	12,960	6,620	19,539	26,001
1982	306,141	40,212	66,668	459,212	40,212	66,668	23,845	5,661	12,636	6,492	19,526	26,289
1983	327,643	43,409	69,754	491,465	43,409	69,754	25,556	6,118	13,447	6,500	19,548	26,738
1984	357,999	46,560	77,367	536,999	46,560	77,367	27,687	6,582	14,781	6,445	19,607	26,499
1985	373,072	46,980	79,600	555,877	46,980	79,600	29,021	6,735	15,280	6,526	19,884	26,625
1986	389,047	48,308	81,833	579,680	48,308	81,833	30,265	6,929	15,716	6,526	19,894	26,637
1987	415,449	49,537	86,064	614,865	49,537	86,064	32,266	7,091	16,493	6,560	19,854	26,580
1988	439,496	51,239	90,158	650,454	51,239	90,158	32,803	7,260	17,123	6,304	19,652	26,342
1989	454,339	52,969	95,349	667,878	52,969	95,349	33,005	7,412	17,495	6,177	19,408	25,449
1990	466,092	53,443	96,367	685,155	53,443	96,367	32,937	7,294	17,469	6,009	18,930	25,143
1991	472,885	53,791	96,949	695,141	53,791	96,949	32,547	7,137	17,165	5,853	18,403	24,557

* 2-axle, 4-tire trucks.

Note: The heat equivalent factors used for Btu conversions are:

Automotive gasoline = 125,000 Btu/gal. (single-unit trucks).

Distillate fuel = 138,700 Btu/gal. (combinations) (other single-unit trucks).

Source: 1960-1984: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

Table 80. Energy Intensiveness of Local Transit Buses and School Buses, 1960-1991

Year	Vehicle-Miles (millions)		Passenger-Miles (millions)		Fuel Consumed (million gallons)		Btu/ Passenger-Mile	
	Motor Bus	School Bus	Motor Bus	School Bus	Motor Bus (Diesel)	School Bus (Gasoline)	Motor Bus	School Bus
1960	1,576	1,481	-	-	208	-	-	-
1961	1,530	1,550	-	-	218	-	-	-
1962	1,515	1,610	-	-	229	227	-	-
1963	1,523	1,642	-	-	235	232	-	-
1964	1,528	1,724	-	-	242	241	-	-
1965	1,528	1,763	-	-	248	249	-	-
1966	1,522	1,884	-	-	256	259	-	-
1967	1,526	1,870	-	-	270	264	-	-
1968	1,508	1,937	-	-	274	277	-	-
1969	1,478	2,030	-	-	274	290	-	-
1970	1,409	2,100	-	-	271	300	-	-
1971	1,376	2,212	-	-	257	316	-	-
1972	1,308	2,359	-	-	253	320	-	-
1973	1,370	2,412	-	-	283	327	-	-
1974	1,431	2,450	-	-	316	333	-	-
1975	1,526	2,500	-	-	365	342	-	-
1976	1,581	2,862	-	-	389	390	-	-
1977	1,623	2,900	19,730	-	403	401	2,833	-
1978	1,631	3,000	20,708	-	422	407	2,827	-
1979	1,634	3,000	21,393	-	423	405	2,742	-
1980	1,677	3,000	21,790	41,000	431	380	2,743	1,159
1981	1,685	3,000	21,012	41,200	446	387	2,944	1,174
1982	1,689	3,000	19,987	40,800	456	399	3,164	1,222
1983	1,678	3,000	20,047	43,100	450	402	3,133	1,166
1984	1,845	3,400	21,595	78,300	505	440	3,243	672
1985	1,863	3,400	21,161	70,000	518	452	3,395	759
1986	2,002	3,700	21,395	89,100	547	476	3,546	648
1987	2,079	3,900	20,970	72,900	543	501	3,592	835
1988	2,097	4,100	20,753	83,200	553	526	3,696	768
1989	2,109	4,000	20,768	80,600	551	498	3,680	772
1990	2,130	3,800	20,981	74,200	563	472	3,722	795
1991 ^P	2,182	4,300	21,150	83,300	575	536	3,771	800

^P preliminary.

Note: The heat equivalent factors used for Btu conversions are:

Automotive gasoline = 125,000 Btu/gal. (School Bus).

Distillate Oil = 138,700 Btu/gal. (Motor Bus).

Source: School Bus: 1960-1991: National Safety Council, *Accident Facts*, annual issues.
(fuel consumed): 1960-1991: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 56 and earlier editions published by Transportation Policy Associates.
Motor Bus: 1960-1991: American Public Transit Association (APTA), *Transit Fact Book*, 1992, pp. 78, 79, 100.

**Table 81. Energy Intensiveness of Class I
Intercity Buses, 1960-1991**

Year	Passenger- Miles (millions)	Fuel Consumed (million gallons)	Btu/ Passenger Mile
1960	13,496	140.0	1,439
1961	13,771	144.4	1,454
1962	14,936	139.0	1,291
1963	15,086	141.3	1,299
1964	15,805	146.3	1,284
1965	15,749	148.2	1,305
1966	16,521	151.4	1,271
1967	19,700	154.5	1,088
1968	19,100	139.5	1,013
1969	17,950	137.4	1,062
1970	17,900	137.7	1,067
1971	17,940	135.3	1,046
1972	17,790	133.7	1,042
1973	18,300	134.4	1,019
1974	19,500	140.7	1,001
1975	18,200	135.1	1,030
1976	17,820	134.8	1,049
1977	16,930	126.4	1,036
1978	16,300	121.9	1,037
1979	17,300	127.6	1,023
1980	16,500	132.2	1,111
1981	15,730	123.0	1,085
1982	16,070	123.1	1,062
1983	14,100	105.8	1,041
1984	13,420	104.7	1,082
1985	12,540	102.6	1,135
1986	12,063	94.2	1,083
1987	11,701	97.8	1,159
1988	11,935	101.6	1,181
1989	13,221	105.1	1,103
1990	13,820	99.0	994
1991	13,682	99.3	997

Note: The heat equivalent factor used in Btu conversion is
138,700 Btu/gal.

Source: Transportation Policy Associates.

**Table 82. Energy Intensiveness of Class I
Railroad Freight, 1960-1991**

Year	Revenue Freight Ton- Miles (millions)	Fuel Consumed (million gallons)	Btu/ Revenue Freight Ton-Mile
1960	572,309	3,463	839
1961	563,361	-	-
1962	592,862	-	-
1963	621,737	-	-
1964	658,639	-	-
1965	697,878	3,592	714
1966	738,395	-	-
1967	719,498	-	-
1968	744,023	-	-
1969	767,841	-	-
1970	764,809	3,181	577
1971	739,743	3,659	686
1972	776,746	3,901	697
1973	851,809	4,051	660
1974	850,961	4,023	656
1975	754,252	3,657	672
1976	794,059	3,828	669
1977	826,292	3,921	658
1978	857,921	3,911	632
1979	904,956	4,025	617
1980	918,621	3,904	589
1981	910,169	3,722	567
1982	797,759	3,130	544
1983	828,275	3,112	521
1984	921,542	3,355	505
1985	876,984	3,110	492
1986	867,722	3,008	481
1987	943,747	3,079	453
1988	996,182	3,159	440
1989	1,013,841	3,169	434
1990	1,033,969	3,115	418
1991	1,038,875	2,906	388

Note: The heat equivalent factor used for Btu conversion is 138,700 Btu/gal.

Source: AAR, *Railroad Facts*, 1992, p. 40, and similar table in earlier editions.

Table 83. Energy Intensiveness of Amtrak Service, 1971-1992

Year	Revenue Passenger- Miles (10 ⁶)	Fuel Consumed			Btu/Revenue Passenger- Mile*
		Locomotive			
		Diesel gallons (10 ⁶)	Electric kWh (10 ⁶)*	Total Fuel Consumed (10 ⁹ Btu)*	
1971	1,894	-	-	-	-
1972	3,038	-	-	-	-
1973	3,807	75.6	181.5	11,477	3,013
1974	4,259	64.8	182.3	10,030	2,355
1975	3,931	63.1	180.3	10,617	2,829
1976	4,268	67.1	183.3	11,590	2,716
1977	4,204	66.9	187.4	12,245	2,913
1978	4,154	69.6	197.4	13,003	3,130
1979	4,867	70.0	247.9	11,854	2,431
1980	4,503	63.5	253.8	10,600	2,354
1981	4,762	48.9	215.5	8,177	1,716
1982	4,172	60.9	218.7	9,801	2,350
1983	4,246	60.0	274.4	9,929	2,339
1984	4,552	63.9	281.5	10,523	2,312
1985	4,785	64.8	295.1	10,236	2,239
1986	5,011	56.8	303.7	9,500	1,900
1987	5,361	58.2	313.9	9,469	1,768
1988	5,686	75.3	246.7	11,324	2,002
1989	5,840	74.7	283.1	11,601	1,986
1990	6,041	82.1	329.6	12,512	2,071
1991	6,274	82.0	302.5	12,393	1,975
1992	6,091	81.5	299.2	12,336	2,025

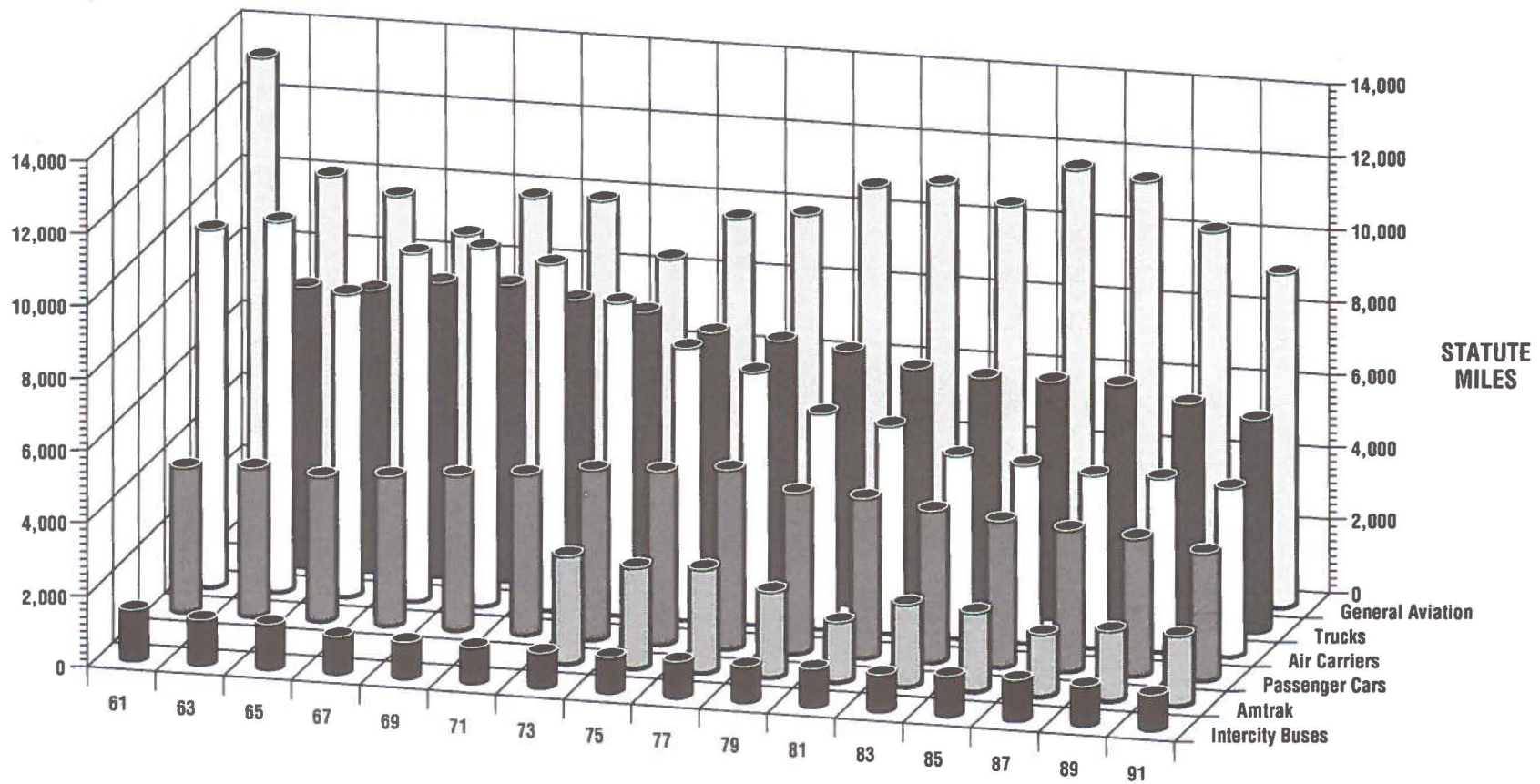
* Does not include electric power generation and distribution losses; which, if included, would increase figures shown by about 20%.

Note: The heat equivalent factors used in Btu conversion are:

Diesel = 138,700 Btu/gal.

Electric = 3,412 Btu/kWh.

Source: Amtrak, State and Local Affairs Department.



Source: Tables 76, 77, 78, 79, 81, 83.

Figure 50. Energy Intensiveness by Passenger Mode, 1961-1991

Part 3. Energy Transport

Included in this section are data showing the types of energy transported in the U.S., the miles traveled, and the means used for transportation. Data cover the period 1960-1991/1992, and in some instances, 1955.

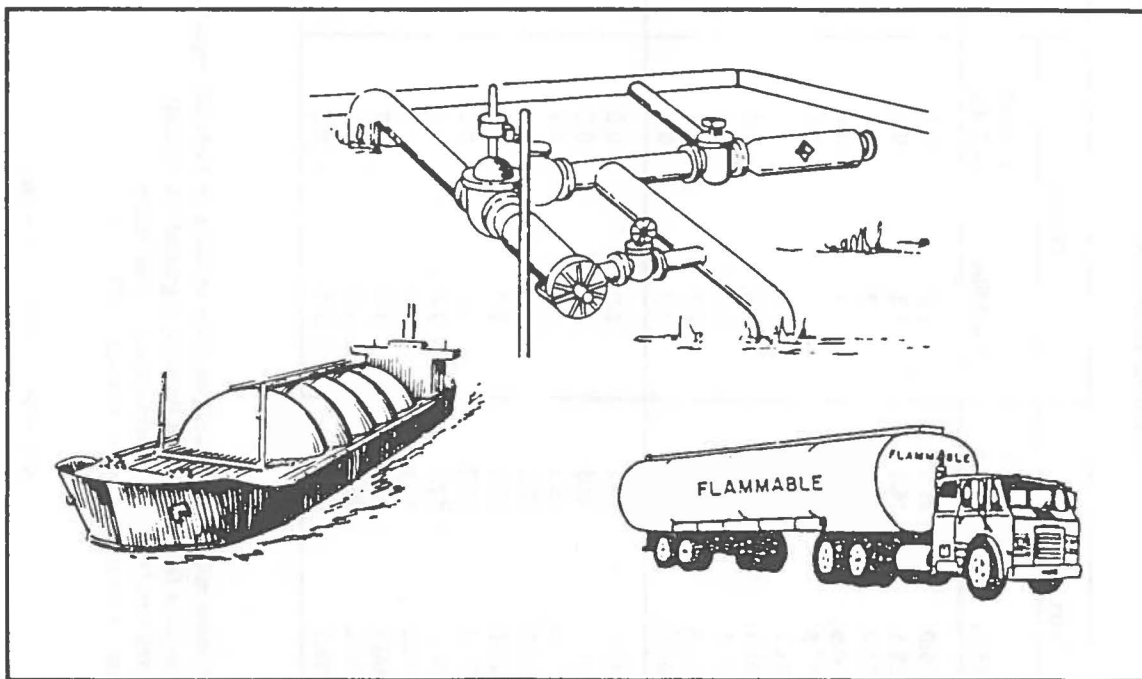


Table 84. Crude Oil Transported in the U.S. by Mode of Transportation, 1972-1992
(billion ton-miles)

Year	Pipelines ¹		Water Carriers		Trucks ^e		Railroads		Total Ton-Miles
	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	
1972	284.5	78.6	76.0	21.0	1.0	0.3	0.5	0.1	362.0
1973	302.0	83.1	58.8	16.1	1.3	0.4	1.1	0.4	363.2
1974	303.0	84.4	53.0	14.3	1.3	0.4	1.6	0.4	358.9
1975	288.0	86.9	40.6	12.2	1.4	0.4	1.5	0.5	331.5
1976	303.0	88.1	37.8	11.0	2.1	0.6	0.9	0.3	343.8
1977	326.6	83.2	63.1	16.1	2.0	0.5	0.8	0.2	392.5
1978	359.5	57.7	261.3	41.9	2.0	0.3	0.7	0.1	623.5
1979	372.2	58.1	265.5	41.4	2.3	0.4	0.6	0.1	640.6
1980	362.6	48.2	387.4	51.4	2.5	0.3	0.5	0.1	753.0
1981	333.1	45.0	404.9	54.6	2.2	0.3	0.5	0.1	740.7
1982	335.1	43.5	432.7	56.2	2.0	0.2	0.4	0.1	770.2
1983	332.4	41.2	471.2	58.5	2.0	0.2	0.5	0.1	806.1
1984	333.0	44.5	412.6	55.1	2.2	0.3	0.6	0.1	748.4
1985	334.4	42.5	449.2	57.2	1.8	0.2	0.8	0.1	786.2
1986	335.2	44.6	413.6	55.1	1.7	0.2	0.8	0.1	751.3
1987	341.5	44.5	423.3	55.2	1.6	0.2	0.9	0.1	767.3
1988	350.7	47.4	386.8	52.3	1.6	0.2	0.8	0.1	739.9
1989	338.7	51.9	312.2	47.8	1.6	0.2	0.5	0.1	653.0
1990	334.5	52.5	300.3	47.2	1.5	0.2	0.5	0.1	636.8
1991 ^p	335.5	52.9	296.4	46.8	1.5	0.2	0.5	0.1	633.9
1992 ^e	327.6	53.0	288.1	46.6	1.5	0.2	0.5	0.1	617.7

^p preliminary.

^e estimate.

¹ The amounts carried by pipeline are based on ton-miles of crude and petroleum products for Federally regulated pipelines (84 percent) plus an estimated breakdown of crude and petroleum products for the ton-miles for pipelines not Federally regulated (16 percent).

Source: 1972-1990: Association of Oil Pipelines, *Shifts in Petroleum Transportation*, annual issues.

1991-1992: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 59.

Table 85. Refined Petroleum Products Transported in the U.S. by Mode of Transportation, 1972-1992
(billion ton-miles)

Year	Pipelines ¹		Water Carriers		Trucks ^e		Railroads		Total Ton-Miles
	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	
1972	191.3	40.1	254.0	53.3	22.0	4.6	9.5	2.0	476.8
1973	205.0	42.7	238.0	49.5	23.7	4.9	13.7	2.9	480.4
1974	203.0	41.5	244.0	49.9	27.7	5.7	14.1	2.9	488.8
1975	219.0	42.5	257.4	50.0	26.2	5.1	12.6	2.4	515.2
1976	212.0	40.5	269.1	51.4	30.4	5.8	12.4	2.3	523.9
1977	219.4	41.3	270.2	50.9	27.6	5.2	13.7	2.6	530.9
1978	226.3	42.2	269.3	50.2	28.6	5.3	12.5	2.3	536.7
1979	236.1	44.2	257.4	48.2	27.8	5.2	12.9	2.4	534.2
1980	225.6	45.8	230.4	46.8	24.3	5.0	12.0	2.4	492.3
1981	230.6	48.3	212.3	44.4	22.7	4.8	12.1	2.5	477.7
1982	230.6	51.5	184.2	41.1	20.7	4.6	12.5	2.8	448.0
1983	223.7	53.6	159.3	38.2	23.1	5.5	11.3	2.7	417.4
1984	235.1	54.4	158.1	36.6	27.0	6.3	11.6	2.7	431.8
1985	229.9	56.2	141.2	34.5	26.9	6.6	11.3	2.7	409.3
1986	242.7	55.6	154.5	35.4	28.0	6.4	11.3	2.6	436.5
1987	245.3	57.3	143.2	33.4	28.8	6.7	11.2	2.6	428.4
1988	250.4	55.9	156.9	35.0	28.9	6.4	12.0	2.7	448.2
1989	245.5	55.7	154.0	34.9	28.8	6.5	12.9	2.9	441.2
1990	249.3	56.0	154.2	34.7	28.2	6.3	13.3	3.0	445.0
1991 ^p	242.3	57.3	140.0	33.1	27.4	6.5	12.9	3.1	422.6
1992 ^e	254.3	57.7	144.8	32.8	28.1	6.4	13.6	3.1	440.8

^p preliminary.

^e estimate.

¹ The amounts carried by pipeline are based on ton-miles of crude and petroleum products for Federally regulated pipelines (84 percent) plus an estimated breakdown of crude and petroleum products for the ton-miles for pipelines not Federally regulated (16 percent).

Source: 1972-1990: Association of Oil Pipelines, *Shifts in Petroleum Transportation*, annual issues.

1991-1992: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 59.

**Table 86. Crude Petroleum and Petroleum Products Transported in the U.S.
by Mode of Transportation, 1972-1992
(billion ton-miles)**

Year	Pipelines ¹		Water Carriers		Trucks ^e		Railroads		Total Ton-Miles
	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	
1972	475.8	56.7	330.0	39.3	23.0	2.7	10.0	1.2	838.8
1973	507.0	60.1	296.8	35.2	25.0	3.0	14.8	1.8	843.6
1974	506.0	59.7	297.0	35.0	29.0	3.4	15.7	1.9	847.7
1975	507.0	59.9	298.0	35.2	27.6	3.3	14.1	1.7	846.7
1976	515.0	59.4	306.9	35.4	32.5	3.8	13.3	1.5	867.7
1977	546.0	59.1	333.3	36.1	29.6	3.2	14.5	1.6	923.4
1978	585.8	50.5	530.6	45.7	30.6	2.6	13.2	1.1	1,160.2
1979	608.3	51.8	522.9	44.5	30.1	2.6	13.5	1.2	1,174.8
1980	588.2	47.2	617.8	49.6	26.8	2.2	12.5	1.0	1,245.3
1981	563.7	46.3	617.2	50.7	24.9	2.0	12.6	1.0	1,218.4
1982	565.7	46.4	616.9	50.6	22.7	1.9	12.9	1.1	1,218.2
1983	556.1	45.5	630.5	51.5	25.1	2.1	11.8	1.0	1,223.5
1984	568.1	48.1	570.7	48.4	29.2	2.5	12.2	1.0	1,180.2
1985	564.3	47.2	590.4	49.4	28.7	2.4	12.1	1.0	1,195.5
1986	577.9	48.7	568.1	47.8	29.7	2.5	12.1	1.0	1,187.8
1987	586.8	49.1	566.5	47.4	30.4	2.5	12.1	1.0	1,195.7
1988	601.1	50.6	543.7	45.8	30.5	2.6	12.8	1.1	1,188.1
1989	584.2	51.0	466.2	45.6	30.4	2.8	12.8	1.1	1,093.6
1990	583.8	54.0	454.5	42.0	29.7	2.8	13.8	1.3	1,081.8
1991 ^p	577.8	54.7	436.4	41.3	28.9	2.7	13.4	1.3	1,056.5
1992 ^e	581.9	55.0	432.9	40.9	29.6	2.8	14.1	1.3	1,058.5

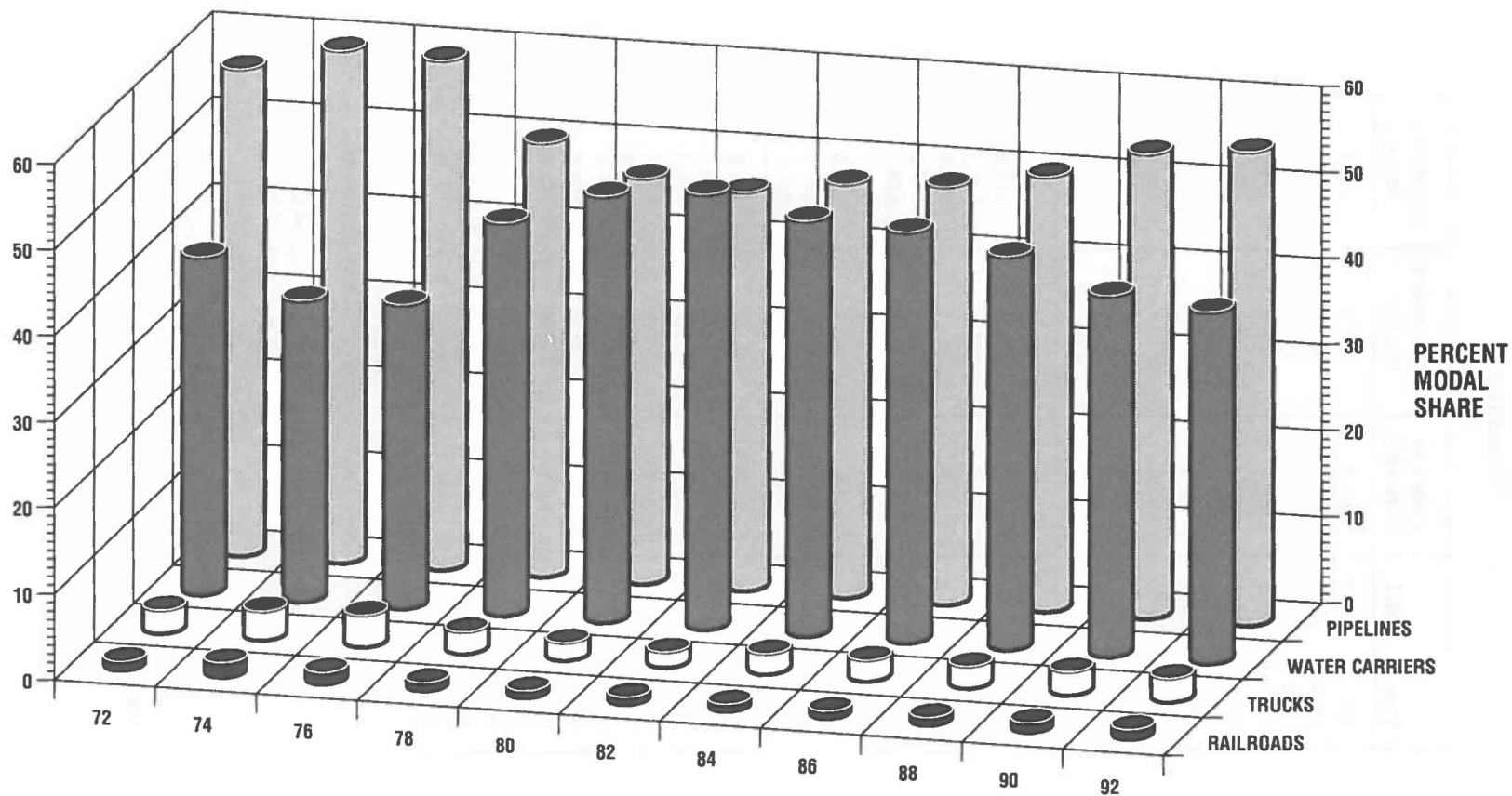
^p preliminary.

^e estimate.

¹ The amounts carried by pipeline are based on ton-miles of crude and petroleum products for Federally regulated pipelines (84 percent) plus an estimated breakdown of crude and petroleum products for the ton-miles for pipelines not Federally regulated (16 percent).

Source: 1972-1990: Association of Oil Pipelines, *Shifts in Petroleum Transportation*, annual issues.

1991-1992: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 59.



Source: See Table 86.

Figure 51. Crude Petroleum and Products Transported in the U.S. by Modal Share, 1972-1992

**Table 87. U.S. Gas Utility Industry Miles of Pipeline and Main, by
Type^a, 1955-1991
(thousands)**

Year	Total	Field and Gathering	Transmission Pipeline ^b	Distribution Main
1955	496.7	45.7	145.9	305.1
1960	630.9	55.8	183.7	391.4
1961	659.0	56.7	191.9	410.4
1962	683.2	58.7	196.4	428.1
1963	709.9	60.7	200.9	448.3
1964	736.2	61.0	205.4	469.8
1965	767.5	61.7	211.3	494.5
1966	799.6	63.0	217.0	519.6
1967	828.3	63.7	225.4	539.2
1968	861.6	64.4	234.5	562.7
1969	891.6	64.9	248.1	578.6
1970	913.3	66.3	252.2	594.8
1971	931.4	66.2	254.8	610.4
1972	948.1	66.9	258.1	623.1
1973	962.9	65.9	263.1	633.8
1974	974.1	66.4	262.2	645.6
1975	979.3	68.5	262.6	648.2
1976	987.7	70.3	258.2	659.1
1977	998.9	71.5	260.5	666.9
1978	1,013.0	74.9	260.6	677.5
1979	1,029.8	77.8	263.5	688.5
1980	1,051.8	83.5	266.5	701.8
1981	1,069.8	86.2	269.5	714.1
1982	1,083.4	90.5	271.7	721.2
1983	1,095.1	91.9	273.5	729.7
1984	1,102.4	93.7	271.9	736.8
1985	1,118.9	94.3	271.2	753.4
1986	1,134.1	93.8	271.0	769.3
1987	1,151.2	93.6	273.8	783.8
1988	1,169.0	92.3	275.4	801.3
1989	1,185.0	90.6	276.3	818.4
1990	1,206.9	89.5	280.1	837.3
1991	1,225.3	86.3	281.6	857.4

^a Includes data for Alaska subsequent to 1960; excludes service pipe. Data not adjusted to common diameter equivalent. Mileage shown as of end of each year.

^b Includes 5,000 miles of Underground Storage pipe in 1975; 5,300 in 1976; 5,200 in 1977; 6,000 in 1978; 5,700 in 1979; 6,200 in 1980; 7,800 in 1981; 5,500 in 1982; 5,900 in 1983 and 1984; 6,000 in 1985, 1986, 1987 and 1988, and 6,200 in 1989, some of which was formerly included in Field and Gathering pipe.

Source: 1955-1991: American Gas Association, *Gas Facts*, 1992, Table 5-1.

Table 88. U.S. Tanker Fleet
(Ocean-going Vessels of 1,000 Gross Tons and Over)
(At 5-Year Intervals 1955-1965 and Annually 1966-1991)

Actual Fleet				
Year	Number	Gross Tons	Deadweight Tons	Average Speed (Knots)
1955	490	5,094,900	7,989,500	15.1
1960	478	5,664,000	8,894,600	15.7
1965	410	5,479,800	8,733,500	16.0
1966	337	5,343,700	8,549,900	16.1
1967	382	5,322,800	8,550,700	16.1
1968	380	5,337,300	8,655,700	16.1
1969	365	5,319,400	8,797,900	16.1
1970	350	5,305,800	8,911,002	16.2
1971	347	5,453,100	9,218,250	16.3
1972	328	5,411,300	9,253,330	16.4
1973	312	5,507,000	9,525,200	16.3
1974	306	5,798,068	10,236,221	16.4
1975	293	5,943,289	10,601,370	16.4
1976	290	6,357,974	11,565,138	16.4
1977	254	6,486,000	11,950,200	16.0
1978	271	7,449,900	13,589,200	16.0
1979	281	8,493,900	15,455,600	16.0
1980	308	8,949,000	16,152,000	16.3
1981	314	9,217,000	16,670,000	16.5
1982	306	9,184,000	16,663,000	15.6
1983	289	9,006,000	16,508,000	16.0
1984	265	8,705,000	15,877,000	15.7
1985	258	8,444,000	15,535,000	16.0
1986	247	8,382,000	15,452,000	15.9
1987	254	9,174,000	16,877,000	16.0
1988	247	9,005,000	16,708,000	16.0
1989	239	8,604,000	15,754,000	16.0
1990	233	8,501,000	15,650,000	16.0
1991	226	8,189,000	14,993,000	15.0

Source: 1955-1976: Sun Oil Company, Division of Planning and Industry Affairs, *Analysis of World Tank Ship Fleet*, 1977, Table 1, and equivalent table in earlier editions.

1977-1991: U.S. DOT/Maritime Administration, *Merchant Fleets of the World*, annual issues, Table 6 and equivalent tables in earlier editions.

Part 4. Energy Supply and Demand

Included in this section are data illustrating the types of energy supplied and used by the end-use sectors from 1955-1991/1992.

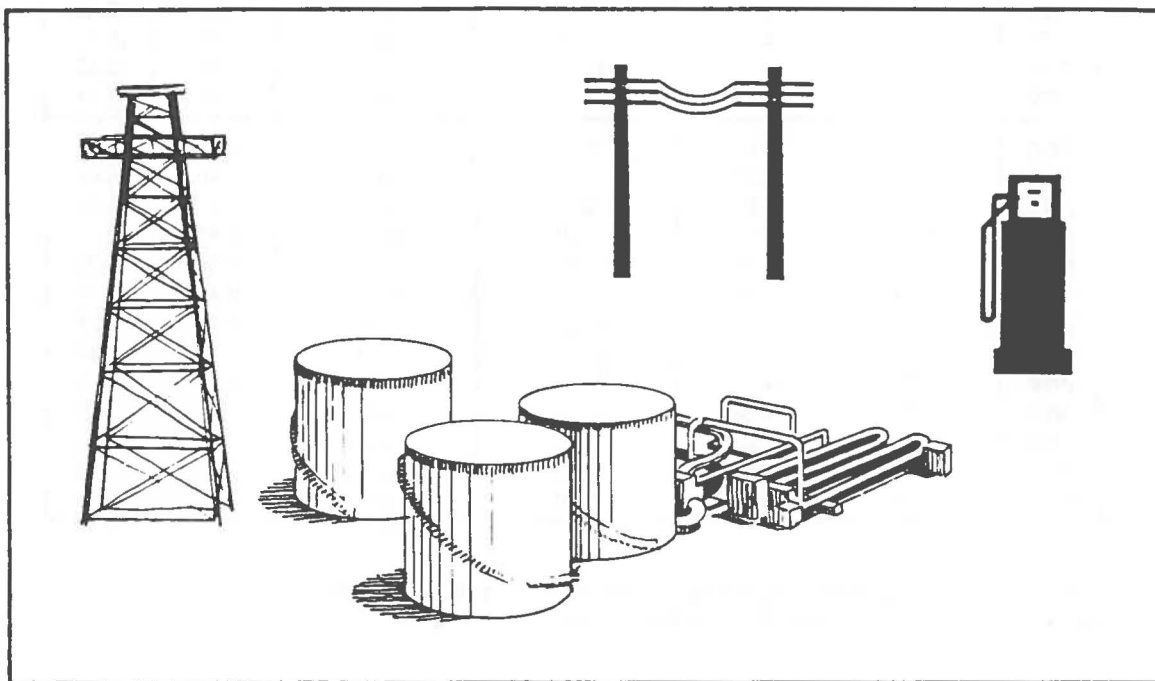


Table 89. Petroleum Products Supplied by Sector, 1955-1992
(million barrels per day)

Year	Residential and Commercial	Industrial	Transportation	Transportation as % of Total	Electric Utilities	Total
1955	1.40	2.39	4.46	52.7	0.21	8.46
1960	1.71	2.71	5.14	52.4	0.24	9.80
1961	1.76	2.73	5.25	52.6	0.23	9.98
1962	1.84	2.84	5.48	52.7	0.24	10.40
1963	1.84	2.96	5.68	52.9	0.26	10.74
1964	1.79	3.12	5.83	52.9	0.28	11.02
1965	1.91	3.25	6.04	52.4	0.32	11.51
1966	1.94	3.40	6.36	52.6	0.39	12.08
1967	2.02	3.43	6.66	53.0	0.44	12.56
1968	2.10	3.58	7.20	53.8	0.52	13.39
1969	2.16	3.76	7.52	53.2	0.69	14.14
1970	2.18	3.81	7.78	52.9	0.93	14.70
1971	2.18	3.84	8.09	53.1	1.09	15.21
1972	2.25	4.19	8.57	52.3	1.36	16.37
1973	2.23	4.48	9.05	52.3	1.54	17.31
1974	2.04	4.30	8.84	53.1	1.48	16.65
1975	1.95	4.04	8.95	54.8	1.39	16.32
1976	2.12	4.45	9.37	53.7	1.52	17.46
1977	2.14	4.82	9.76	52.9	1.71	18.43
1978	2.07	4.87	10.16	53.8	1.75	18.85
1979	1.73	5.34	10.01	54.0	1.44	18.51
1980	1.52	4.84	9.55	56.0	1.15	17.06
1981	1.33	4.27	9.49	59.1	0.96	16.06
1982	1.24	4.06	9.31	61.0	0.69	15.30
1983	1.29	3.85	9.41	61.8	0.68	15.23
1984	1.29	4.19	9.68	61.5	0.56	15.73
1985	1.30	4.10	9.85	62.6	0.48	15.73
1986	1.31	4.11	10.23	62.8	0.64	16.28
1987	1.33	4.25	10.53	63.2	0.55	16.67
1988	1.34	4.39	10.87	62.9	0.68	17.28
1989	1.32	4.26	11.01	63.5	0.74	17.33
1990	1.14	4.32	10.97	64.6	0.55	16.99
1991	1.14	4.25	10.80	64.6	0.52	16.71
1992 ^e	1.17	4.49	10.93	64.3	0.41	17.01

^e estimate.

Note: Sum of components may not equal total due to independent rounding.

Source: U.S. DOE/EIA, *Annual Energy Review 1992*, Table 5.12.

**Table 90. Domestic Demand for Refined Petroleum Products
Supplied by Sector, 1955-1992
(million Btu's per day)¹**

Year	Residential and Commercial	Industrial	Transportation	Transportation as % of Total	Electric Utilities	Total
1955	7.85	14.02	24.12	51.0	1.31	47.30
1960	9.53	15.72	27.69	50.9	1.50	54.44
1961	9.80	15.82	28.28	51.0	1.44	55.41
1962	10.22	16.43	29.52	51.2	1.50	57.67
1963	10.18	17.05	30.58	51.4	1.63	59.44
1964	9.88	17.87	31.41	51.6	1.75	60.92
1965	10.57	18.61	32.54	51.1	2.01	63.67
1966	10.71	19.45	34.27	51.3	2.44	66.83
1967	11.05	19.49	35.90	51.8	2.76	69.27
1968	11.45	20.21	38.84	52.7	3.26	73.70
1969	11.66	21.07	40.56	52.2	4.32	77.66
1970	11.78	21.35	41.96	51.9	5.81	80.89
1971	11.75	21.50	43.60	52.1	6.81	83.72
1972	12.08	23.31	46.18	51.3	8.48	90.04
1973	12.01	24.24	48.82	51.1	9.62	95.46
1974	10.97	23.81	47.68	52.0	9.23	91.64
1975	10.45	22.33	48.26	53.8	8.69	89.70
1976	11.41	24.64	50.56	52.6	9.50	96.10
1977	11.53	26.78	52.70	51.8	10.69	101.70
1978	11.42	27.04	54.90	52.8	10.94	104.03
1979	9.46	28.93	54.33	53.4	9.01	101.69
1980	8.31	26.02	51.95	55.6	7.19	93.47
1981	7.19	22.69	51.55	58.9	6.01	87.49
1982	6.69	21.36	50.48	60.9	4.32	82.85
1983	6.97	20.30	50.96	61.9	4.25	82.33
1984	6.95	21.88	52.48	61.8	3.50	84.86
1985	6.92	21.41	53.42	63.0	3.00	84.74
1986	7.02	21.73	55.52	62.9	4.00	88.21
1987	7.07	22.33	57.18	63.5	3.44	90.07
1988	7.13	23.03	59.07	63.2	4.25	93.48
1989	6.94	22.29	59.89	63.9	4.25	93.76
1990	5.94	22.78	59.73	65.0	4.62	91.93
1991	5.89	22.07	58.77	65.3	3.25	89.97
1992	6.03	23.31	59.50	65.1	2.56	91.46

¹ Data derived by multiplying figures in previous table by conversion factors in each sector column in Table A3 in U.S. DOE's *Annual Energy Review 1992*.

Table 91. Petroleum Products Supplied by Type and Sector, 1979 and 1992

Year and Refined Product	Residential and Commercial		Industrial		Transportation		Electric Utilities		Total	
	Million Barrels Per Day	Quad-rillion Btu	Million Barrels Per Day	Quad-rillion Btu	Million Barrels Per Day	Quad-rillion Btu	Million Barrels Per Day	Quad-rillion Btu	Million Barrels Per Day	Quad-rillion Btu
1979										
Asphalt and Road Oil	0.00	0.00	0.48	1.15	0.00	0.00	0.00	0.00	0.48	1.15
Aviation Gasoline	0.00	0.00	0.00	0.00	0.04	0.07	0.00	0.00	0.04	0.07
Distillate Fuel Oil	1.04	2.21	0.83	1.76	1.37	2.91	0.08	0.16	3.31	7.04
Jet Fuel	0.00	0.00	0.00	0.00	1.07	2.19	0.01	0.02	1.08	2.20
Kerosene	0.10	0.21	0.09	0.18	0.00	0.00	0.00	0.00	0.19	0.39
Liquefied Petroleum Gases	0.31	0.42	1.27	1.70	0.02	0.02	0.00	0.00	1.59	2.14
Lubricants	0.00	0.00	0.09	0.20	0.09	0.19	0.00	0.00	0.18	0.40
Motor Gasoline	0.05	0.10	0.08	0.16	6.90	13.22	0.00	0.00	7.03	13.49
Residual Fuel Oil	0.22	0.51	0.72	1.66	0.54	1.23	1.35	3.10	2.83	6.49
Other ¹	0.00	0.00	1.79	3.75	0.00	0.00	*	0.01	1.79	3.77
Total	1.73	3.45	5.34	10.57	10.01	19.82	1.44	3.28	18.51	37.12
1992										
Asphalt and Road Oil	0.00	0.00	0.45	1.10	0.00	0.00	0.00	0.00	0.45	1.10
Aviation Gasoline	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.02	0.04
Distillate Fuel Oil	0.63	1.35	0.55	1.17	1.79	3.77	0.03	0.07	2.98	6.36
Jet Fuel	0.00	0.00	0.00	0.00	1.45	2.99	0.00	0.00	1.45	2.99
Kerosene	0.04	0.08	0.01	0.01	0.00	0.00	0.00	0.00	0.04	0.09
Liquefied Petroleum Gases	0.36	0.48	1.37	1.82	0.02	0.02	0.00	0.00	1.75	2.31
Lubricants	0.00	0.00	0.08	0.17	0.07	0.16	0.00	0.00	0.15	0.33
Motor Gasoline	0.05	0.09	0.10	0.20	7.12	13.70	0.00	0.00	7.27	13.98
Residual Fuel Oil	0.10	0.23	0.15	0.34	0.48	1.09	0.37	0.85	1.09	2.51
Other ¹	0.00	0.00	1.78	3.73	0.00	0.00	0.01	0.03	1.79	3.76
Total	1.17	2.22	4.49	8.53	10.93	21.78	0.41	0.95	17.01	33.47

* Less than 5,000 barrels per day.

¹ Other in the industrial sector includes petrochemical feedstock, special naphthas, wax, petroleum coke, still gas, natural gasoline, pentanes plus crude oil and miscellaneous products. Other for electric utilities is petroleum coke.

Note: Sum of components may not equal total due to independent rounding.

Source: U.S. DOE/EIA, *Annual Energy Review 1992, 1989*, Tables 62 and 5.13.

**Table 92. Domestic Demand for Gasoline,
(at 5-Year Intervals 1955-1965 and Annually 1966-1991)
(thousand gallons)**

Year	Total Demand	Highway	Non-Highway				
			Agriculture	Aviation ^a	Marine	Other ^b	Total
1955	52,566,255	47,731,734	2,156,434	999,440	25,885	1,652,762	4,834,521
1960	63,221,243	57,879,908	2,291,666	1,323,769	60,633	1,656,267	5,332,335
1965	75,312,613	71,104,430	1,963,432	501,339	96,336	1,647,076	4,208,183
1966	78,433,827	74,623,040	2,166,838	675,445	485,823	-	3,810,787
1967	81,322,844	77,692,650	2,041,230	626,697	501,385	-	3,630,194
1968	86,553,245	82,943,731	2,047,029	576,479	532,752	-	3,609,514
1969	91,792,473	88,122,286	1,964,546	481,898	568,564	-	3,670,187
1970	96,331,909	92,329,056	1,931,966	393,012	598,159	1,079,713	4,002,850
1971	101,471,956	97,558,586	1,864,708	359,549	645,428	1,043,865	3,913,370
1972	108,886,206	105,062,178	1,698,185	355,178	686,763	1,083,902	3,824,028
1973	114,368,632	110,472,881	1,749,776	395,018	716,990	1,033,967	3,895,751
1974	109,923,280	106,300,765	1,605,809	394,806	696,906	924,994	3,622,515
1975	112,626,656	108,984,347	1,564,882	409,713	729,718	937,996	3,642,309
1976	119,478,018	115,700,146	1,472,272	529,238	763,803	1,012,559	3,777,872
1977	123,350,479	119,625,280	1,360,220	552,615	774,066	1,038,298	3,725,199
1978	115,816,431	112,239,066	1,228,772	457,372	811,850	1,079,371	3,577,365
1979	111,771,026	108,125,994	1,152,097	502,977	780,171	1,209,787	3,645,032
1980	104,837,657	101,183,014	1,059,044	412,883	1,052,185	1,130,531	3,654,643
1981	103,111,410	99,596,671	962,149	376,708	1,092,982	1,082,900	3,514,739
1982	101,738,767	98,478,881	912,062	372,637	1,061,931	913,256	3,259,886
1983	103,180,290	99,964,516	735,919	407,110	1,069,072	1,003,673	3,215,774
1984	105,300,798	101,415,509	1,152,912	382,976	1,325,012	1,024,389	3,885,289
1985	107,612,794	103,607,851	1,080,677	381,515	1,052,998	1,489,753	4,004,943
1986	110,823,992	106,756,056	964,226	378,064	1,130,305	1,595,341	4,067,936
1987	112,810,688	108,702,264	921,692	360,195	1,178,753	1,647,764	4,108,404
1988	113,836,534	109,816,325	806,097	359,019	1,217,885	1,637,208	4,020,209
1989	114,681,547	110,632,453	821,612	351,317	1,251,931	1,624,234	4,049,094
1990	114,262,125	110,184,150	681,220	357,718	1,300,421	1,738,616	4,077,975
1991	112,259,709	107,948,371	776,217	339,103	1,709,687	1,486,331	4,311,338

^a Does not include aviation jet fuel.

^b Includes state, county, and municipal use, industrial, commercial, construction and miscellaneous.

Source: 1955-1976: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Tables MF-24 and MF-26.

1977-1991: *Ibid.*, Tables MF-21A and MF-24.

SUPPLEMENTARY DATA

SECTION III: Results of Nationwide Personal Transportation Survey (NPTS)

Results of the Nationwide Personal Transportation Survey (NPTS) is the final part of the supplementary data section. Travel data by characteristics of the trip and tripmaker are presented for the years 1969, 1977, 1983, and 1990.

Nationwide Personal Transportation Survey (NPTS)

The NPTS is a periodic national survey that provides comprehensive information on travel by the U.S. population, along with related socioeconomic characteristics of the tripmaker. The NPTS is designed to allow an analysis of travel by characteristics of the trip (e.g., length, purpose, mode), the tripmaker (e.g., age, sex, household income) and the vehicle used (e.g., model year, vehicle type, make and model). NPTS surveys were conducted in 1969, 1977, 1983, and 1990.

SPONSORSHIP

The 1990 NPTS was sponsored by a group of Department of Transportation (DOT) agencies, specifically the Federal Highway Administration, Federal Railroad Administration, National Highway Traffic Safety Administration, Office of the Secretary, and the Federal Transit Administration. The survey was conducted for DOT by Research Triangle Institute, located in North Carolina.

CONTENT

Information was collected on all trips taken by each household member age 5 and older during a designated 24-hour period, known as "travel day", and on trips of 75 miles or more taken during the preceding 14-day period, known as "travel period." The trip information was expanded to annual estimates of trips and travel. The survey encompassed trips on all modes of transportation for all trip purposes and all lengths. In addition, the NPTS collected information on the demographic characteristics of household members, characteristics of household vehicles, estimates of annual driving, and highway accidents in the past five years.

SAMPLE DESIGN AND SURVEY METHODOLOGY

The 1990 NPTS was a national random-digit dialing sample which yielded interviews from 18,000 households throughout the United States. The sampling frame was stratified by population size of the area, region of the country, and for areas of one million or more, by presence or absence of a subway system. The interviews were conducted from March 1990 through March 1991, with approximately 1500 households interviewed each month to balance seasonal variations in travel. The survey was conducted by telephone, using a computer-assisted telephone interview (CATI) system. The survey response rate was 84 percent, which means that of all eligible households contacted, 84 percent participated in the survey.

REPORTS AND PRODUCTS

Products from the 1990 NPTS to date include public-use tape/diskettes and reports entitled "Summary of Travel Trends" and "Travel Behavior Issues in the 90's." Additional reports in the series will include the "1990 NPTS Databook" and "NPTS Urban Travel Patterns." The reports are available from the Office of Highway Information Management (202) 366-0160. The public-use tape/diskettes with accompanying documentation are available from the Volpe National Transportation Systems Center (617-494-2450).

TABLES

The tables in this chapter contain data on demographic and travel changes over time, household vehicle ownership, vehicle trips and vehicle miles of travel, average annual miles per licensed driver, and person trips by women. Comparisons are made with data from previous NPTS surveys.

**Table 93. Summary Statistics on Demographic Characteristics and Total Travel,
1969-1990**

	1969	1977	1983	1990	Percent Change				
					1969- 1977	1977- 1983	1983- 1990	1969- 1983	1969- 1990
Households	62,504	75,412	85,371	93,347	21	13	9	37	49
Persons	197,213	213,141	229,453	239,416	8	8	4	16	21
Licensed Drivers	102,986	127,552	147,015	163,025	24	15	11	43	58
Workers	75,758	93,019	103,224	118,343	23	11	15	36	56
Household Vehicles ^b	72,500	120,098	143,714	165,221	66	20	15	98	128
Household Vehicle Trips ^a	87,284	108,826	126,874	158,927	25	17	25	45	82
Household Vehicles Miles of Travel ^a	775,940	907,603	1,002,139	1,409,600	17	10	41	29	82
Person Trips ^{a,c}	145,146	211,778	224,385	249,562	46	6	11	55	72
Person Miles of Travel ^{a,c}	1,404,137	1,879,215	1,946,662	2,315,300	34	4	19	39	65

Note: All numbers in thousands except where noted.

^a In millions.

^b 1969 survey includes only automobiles, station wagons, and vanbuses/minibuses as household vehicles.

^c 1969 survey does not include walk and bicycle trips.

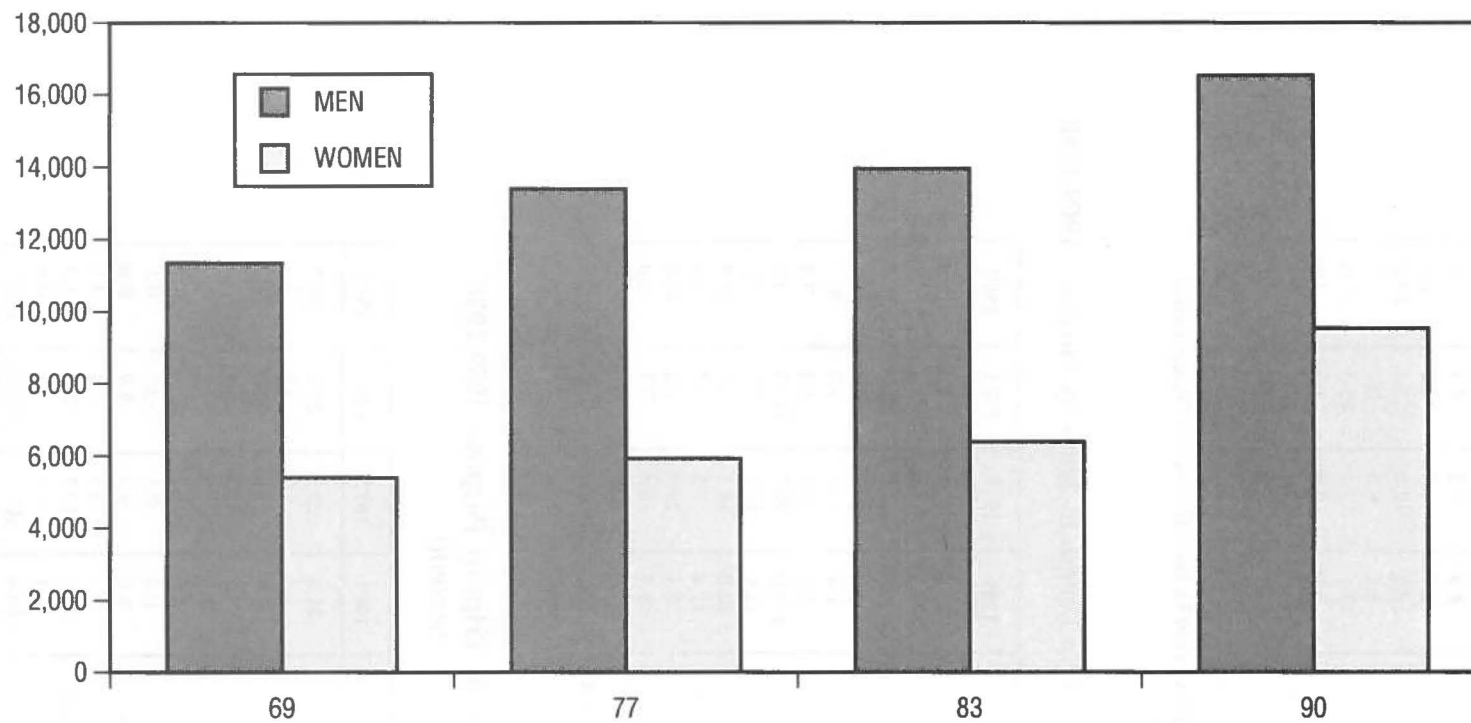
Source: U.S. DOT/FHWA, *1990 Nationwide Personal Transportation Survey (NPTS), Summary of Travel Trends*, Table 1.

**Table 94. Household Travel Rates and Demographic Indicators,
1969-1990**

Rate	1969*	1977	1983	1990
Annual Vehicle Trips Per Household	1,396	1,442	1,486	1,702
Annual VMT Per Household	12,423	12,036	11,739	15,100
Annual Person Trips Per Household	2,322	2,808	2,628	2,673
Annual Person Miles Per Household	22,465	24,919	22,802	24,803
Persons Per Household	3.2	2.8	2.7	2.6
Licensed Driver Per Household	1.7	1.7	1.7	1.8
Vehicles Per Household	1.2	1.6	1.7	1.8
Workers Per Household	1.2	1.2	1.2	1.3

* In the 1969 survey, only auto and van trips were collected as private vehicle trips. In 1977, 1983, and 1990 surveys, the definition of private vehicle was expanded to include pickups and other light trucks, recreational vehicles, motorcycles and mopeds.

Source: U.S. DOT/FHWA, *1990 Nationwide Personal Transportation Survey (NPTS), Summary of Travel Trends*.



Source: U.S. DOT/FHWA, 1990 *Nationwide Personal Transportation Survey (NPTS)*, *Summary of Travel Trends*.

Figure 52. Average Annual Miles Per Licensed Driver, 1969-1990

**Table 95. Vehicle Miles of Travel (VMT) by Purpose, 1969-1990
(percent)**

Purpose	1969	1977	1983	1990
Work	33.6	31.7	30.1	32.1
Work-Related Business	7.9	7.6	4.2	3.0
Shopping	7.5	11.1	13.4	11.5
School/Church	4.9	5.2	4.1	4.4
Doctor/Dentist	1.6	1.8	1.5	1.3
Other Personal Business	10.2	12.0	15.5	20.0
Vacation	2.6	0.6	2.1	1.5
Visit Friends/Relatives	12.1	12.1	13.5	11.6
Pleasure Driving	3.1	0.9	1.1	0.6
Other Social/Recreational	15.3	13.7	13.3	13.2
Other	1.2	3.3	1.2	0.8
All Purposes	100.0	100.0	100.0	100.0

Source: U.S. DOT/FHWA, 1990 Nationwide Personal Transportation Survey (NPTS).

Table 96. Average Vehicle Trip Length in Miles by Purpose, 1969-1990

Purpose	1969	1977	1983	1990
Work	9.4	9.1	8.5	11.0
Work-Related Business	16.1	11.9	11.4	15.1
Shopping	4.4	5.0	5.3	5.1
School/Church	4.7	5.9	5.5	7.5
Doctor/Dentist	8.4	10.3	9.7	10.5
Other Personal Business	6.5	6.8	6.7	7.4
Vacation	160.0	77.9	113.9	114.9
Visit Friends/Relatives	12.0	10.9	10.8	11.8
Pleasure Driving	20.0	14.1	22.7	21.9
Other Social/Recreational	11.4	9.3	8.7	10.5
Other	9.4	29.3	7.2	10.8
All Purposes	8.9	8.4	7.9	9.0

Source: U.S. DOT/FHWA, 1990 Nationwide Personal Transportation Survey (NPTS).

**Table 97. Vehicle Trips by Purpose, 1969-1990
(percent)**

Purpose	1969	1977	1983	1990
Work	31.9	29.3	27.8	26.3
Work-Related Business	4.4	5.3	2.9	1.8
Shopping	15.3	18.6	20.0	20.3
School/Church	9.3	7.3	5.9	5.3
Doctor/Dentist	1.7	1.5	1.2	1.1
Other Personal Business	14.0	14.9	18.3	24.1
Vacation	0.0	0.1	0.2	0.1
Visit Friends/Relatives	9.0	9.3	9.9	8.8
Pleasure Driving	1.4	0.5	0.4	0.3
Other Social/Recreational	11.9	12.3	12.1	11.3
Other	1.1	0.9	1.3	0.6
All Purposes	100.0	100.0	100.0	100.0

Source: U.S. DOT/FHWA, 1990 Nationwide Personal Transportation Survey (NPTS).

**Table 98. Person Trips Taken by Women by Mode and Purpose
1983 and 1990
(millions)**

Purpose	Mode						Total	
	Private		Public		Other ¹			
	1983	1990	1983	1990	1983	1990	1983	1990
Earning a Living	18,200	21,900	1,250	1,011	1,414	1,204	20,864	24,115
Family & Personal Business	40,000	55,600	476	656	3,475	3,771	43,951	60,027
Civic, Education & Religious	8,172	10,000	720	627	5,296	4,660	14,188	15,287
Social & Recreational	26,300	27,200	428	384	4,074	3,851	30,802	31,435
Other	2,276	791	48	8	385	145	2,709	944
All Purposes	94,948	115,491	2,922	2,686	14,644	13,631	112,514	131,808

¹ Includes trips by bicycle, walking, school bus, taxi, airplane, Amtrak, moped and other modes.

Source: U.S. DOT/FHWA, 1990 *Nationwide Personal Transportation Survey (NPTS)*, *Summary of Travel Trends*.

APPENDIX A

Source Information

Appendix A is a detailed list of the data sources used in this publication. The parenthetical numbers in Figures 1 through 7 indicate the data source. The data sources are also shown for Tables 1 through 8, 10, 11, 17, 34, 35, and 42, as well as the Modal Profiles. Readers who may require additional data or information should refer to the data source(s).

FIGURE REFERENCES (FIGURE 1 - FIGURE 7)

Figure 1. Expenditures and Revenues, 1991

1. Domestic Transportation: Sum of Highway, Local Transit, Rail, Air, Water, and Pipeline.
2. Highway: Sum of Auto, Truck, and Bus.
3. Auto: Sum of Personal Passenger Car, Taxi, and Motorcycle.
4. Personal Passenger Car: U.S. Department of Commerce (DOC), Bureau of Economic Analysis, *Survey of Current Business*, July issues, Table 2.4. Auto registration and driver's license fees from the U.S. DOT/Federal Highway Administration (FHWA), *Highway Statistics*, 1991, Table MV-2 are also included.
5. Taxi: U.S. Department of Commerce (DOC), Bureau of Economic Analysis, *Survey of Current Business*, July issues, Table 2.4.
6. Motorcycle: Motorcycle Industry Council, Inc., *1992 Motorcycle Statistical Annual*, p. 11.
7. Truck: Sum of Local Truck and Intercity Truck.
8. Local Truck: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 40.
9. Intercity Truck: Sum of ICC-authorized Truck and Non-ICC-authorized Truck.
10. ICC-authorized Truck: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 40. Revenues of the Class I, II, III motor carriers of property. Revenues include local cartage under the assumption that the majority of such revenues constitute pickup and delivery of intercity freight.
11. Non-ICC-authorized Truck: *Ibid.*
12. Bus: Sum of Intercity Bus and School Bus.
13. Intercity Bus: Sum of Passenger and Cargo.
14. Passenger, Intercity Bus: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 42.
15. Cargo, Intercity Bus: *Ibid.*, p. 40.
16. School Bus: *Ibid.*, p. 42.
17. Local Transit: American Public Transit Association (APTA), *Transit Fact Book*, 1992, p. 51.
18. Rail: Sum of Passenger, Freight, and Other.
19. Rail, Passenger: Sum of Class I Rail and Amtrak.
20. Rail, Class I: Association of American Railroads (AAR), *Railroad Facts*, 1992, p. 10.
21. Amtrak: Amtrak, State and Local Affairs Department.
22. Rail, Freight: AAR, *Railroad Facts*, 1992, p. 13.
23. Rail, Other: *Ibid.*, p. 10.
24. Air: Sum of General Aviation and Air Carrier.
25. General Aviation: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 42. Figure represents the sum of operating costs and total retail value of new general aviation aircraft.
26. Air Carrier: U.S. DOT/Research and Special Programs Administration (RSPA), *Air Carrier Financial Statistics*, 1991/1992, p. 1, total operating revenues, domestic operations.
27. Total Majors: *Ibid.*, p. 3, total operating revenues in scheduled and nonscheduled services.
28. Total Nationals: *Ibid.*, p. 31, total operating revenues in scheduled and nonscheduled services.
29. Total Large Regionals: *Ibid.*, p. 50, total operating revenues in scheduled and nonscheduled service.
30. Water: Sum of Passenger, Freight, and Commercial Fishing.
31. Passenger, Water: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 42. Figure represents revenues of ICC-regulated carriers. Expenditures for private boating are not available.
32. Freight, Water: *Ibid.*, p. 40, domestic operations only.
33. Commercial Fishing: U.S. DOC, NOAA, *Fisheries Statistics of U.S.*, 1992.
34. Pipeline: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 40, includes revenues of regulated and non-regulated oil pipelines.

Figure 2. Vehicle-Miles, 1991

1. Domestic Transportation: Sum of Highway, Local Transit, Rail, and Air.
2. Highway: Sum of Auto, Truck, and Bus.
3. Auto: Sum of Personal Passenger Car and Motorcycle.
4. Personal Passenger Car (includes Taxi): U.S. DOT/Federal Highway Administration (FHWA), *Highway Statistics*, 1991, Table VM-1, includes total rural and urban.
5. Motorcycle: *Ibid.*
6. Truck: *Ibid.*
7. Single-Unit: *Ibid.*
8. Other Single-Unit: *Ibid.*
9. Combination: *Ibid.*
10. Bus: Sum of Commercial Bus and School Bus.
11. Commercial Bus: estimated by Transportation Policy Associates (TPA).
12. School Bus: National Safety Council, *Accident Facts*, 1992, p. 71.
13. Local Transit: APTA, *Transit Fact Book*, 1992, p. 27.
14. Motor Bus: *Ibid.*
15. Heavy Rail: *Ibid.*
16. Light Rail: *Ibid.*
17. Trolley Bus: *Ibid.*
18. Demand Response: *Ibid.*
19. Ferryboat: *Ibid.*
20. Other: *Ibid.*
21. Commuter Rail: *Ibid.*
22. Rail: Sum of Amtrak and Freight.
23. Amtrak: Amtrak, State and Local Affairs Department.
24. Freight, Rail: AAR, *Railroad Facts*, 1992, p. 34.
25. Air: Sum of General Aviation and Air Carrier.
26. General Aviation: U.S. DOT/FAA, *General Aviation Activity and Avionics Survey*, 1991, Table 3.3; mileage multiplied by 1.151 to convert from nautical miles.
27. Air Carrier: U.S. DOT/RSPA, *Air Carrier Traffic Statistics*, December 1992/1991, p. 2, sum of scheduled aircraft revenue miles, line 27, and nonscheduled aircraft revenue miles, line 50.
28. Total Majors: *Ibid.*, p. 5, sum of scheduled, line 27, and nonscheduled, line 50, services.
29. Scheduled: *Ibid.*, p. 5, line 27.
30. Nonscheduled: *Ibid.*, p. 5, line 50.
31. Total Nationals: *Ibid.*, p. 56, sum of scheduled, line 27, and nonscheduled, line 50, services.
32. Scheduled: *Ibid.*, line 27.
33. Nonscheduled: *Ibid.*, line 50.
34. Total Large Regionals: *Ibid.*, p. 96, sum of scheduled, line 27, and nonscheduled, line 50, services.
35. Scheduled: *Ibid.*, line 27.
36. Nonscheduled: *Ibid.*, line 50.
37. Total Medium Regionals: *Ibid.*, p. 148, includes domestic and international operations, sum of scheduled, line 27, and nonscheduled, line 50, services.
38. Scheduled: *Ibid.*, line 27.
39. Nonscheduled: *Ibid.*, line 50.
40. Water: See Block 19.

Figure 3. Passenger-Miles, 1991

1. Domestic Transportation: Sum of Highway, Local Transit, Rail, Air; Water data not available.
2. Highway: Sum of Auto, Truck, and Bus.
3. Auto: Sum of Personal Passenger Car and Motorcycle.
4. Personal Passenger Car (includes Taxi): Passenger-miles derived by multiplying vehicle-miles by vehicle occupancy rates estimated from the FHWA, Nationwide Personal Transportation Surveys.
5. Motorcycle: *Ibid.*
6. Truck: Sum of Single-Unit Truck and Combination Truck.
7. Single-Unit: Passenger-miles derived by multiplying vehicle-miles by vehicle occupancy rates estimated from the FHWA, Nationwide Personal Transportation Surveys.
8. Other Single-Unit: *Ibid.*
9. Combination: *Ibid.*
10. Bus: Sum of Intercity Bus and School Bus passenger-miles.
11. Intercity Bus: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 47.
12. Class I: estimated by Transportation Policy Associates.
13. Class II and III: Figure derived by subtraction of Class I from Intercity.
14. School Bus: National Safety Council, *Accident Facts*, 1992, p. 70.
15. Local Transit: APTA, *Transit Fact Book*, 1992, p. 78.
16. Motor Bus: *Ibid.*
17. Heavy Rail: *Ibid.*
18. Light Rail: *Ibid.*
19. Trolley Bus: *Ibid.*
20. Demand Response: *Ibid.*
21. Ferryboat: *Ibid.*
22. Other: *Ibid.*
23. Commuter Rail: *Ibid.*
24. Rail: Amtrak total.
25. Amtrak: Amtrak, State and Local Affairs Department.
26. Air: Sum of General Aviation and Air Carrier.
27. General Aviation: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 47.
28. Air Carrier: U.S. DOT/RSPA, *Air Carrier Traffic Statistics*, December 1992/1991, p. 2, revenue passenger-miles, all services, line 1.
29. Total Majors: *Ibid.*, p. 5, sum of scheduled, line 9, and nonscheduled, line 41, services.
30. Scheduled: *Ibid.*, line 9.
31. Nonscheduled: *Ibid.*, line 41.
32. Total Nationals: *Ibid.*, p. 56, sum of scheduled, line 9, and nonscheduled, line 41, services.
33. Scheduled: *Ibid.*, line 9.
34. Nonscheduled: *Ibid.*, line 41.
35. Total Large Regionals: *Ibid.*, p. 96, sum of scheduled, line 9, and nonscheduled, line 41, services.
36. Scheduled: *Ibid.*, line 9.
37. Nonscheduled: *Ibid.*, line 41.
38. Total Medium Regionals: *Ibid.*, p. 148, includes domestic and international operations, sum of scheduled, line 9, and nonscheduled, line 41, services.
39. Scheduled: *Ibid.*, line 9.
40. Nonscheduled: *Ibid.*, line 41.
41. Water: See Block 21.

Figure 4. Revenue Ton-Miles of Freight, 1991

1. Domestic Transportation: Sum of Highway, Rail, Air, Water and Pipeline.
2. Highway: Figure represents total intercity ton-miles of motor vehicle transport.
3. Truck: Sum of local and intercity ton-miles.
4. Local: Sum of Single-Unit and Combination Trucks.
5. Single-Unit: estimated by Transportation Policy Associates.
6. Combination: *Ibid.*
7. Intercity: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 44.
8. Rail: AAR, *Railroad Facts*, 1992, p. 40.
9. Air: Total Air Carrier.
10. Air Carrier: U.S. DOT/RSPA, *Air Carrier Traffic Statistics*, December 1992/1991, p. 2, Freight, Express, U.S. and Foreign Mail Revenue ton-miles, all services, line 3.
11. Total Majors: *Ibid.*, p. 5, line 3.
12. Scheduled: *Ibid.*, sum of Freight, Air Express, U.S. Mail and Foreign Mail, lines 18-21.
13. Nonscheduled: *Ibid.*, sum of Civilian Freight, line 44, and Military Freight, line 45.
14. Total Nationals: *Ibid.*, p. 56, line 3.
15. Scheduled: *Ibid.*, sum of Freight, Air Express, U.S. Mail and Foreign Mail, lines 18-21.
16. Nonscheduled: *Ibid.*, sum of Civilian Freight, line 44, and Military Freight, line 45.
17. Total Large Regionals: *Ibid.*, p. 96, line 3.
18. Scheduled: *Ibid.*, sum of Freight, Air Express, U.S. Mail and Foreign Mail, lines 18-21.
19. Nonscheduled: *Ibid.*, sum of Civilian Freight, line 44, and Military Freight, line 45.
20. Total Medium Regionals: *Ibid.*, p. 148, line 3, includes international operations.
21. Scheduled: *Ibid.*, sum of Freight, Air Express, U.S. Mail and Foreign Mail, lines 18-21.
22. Nonscheduled: *Ibid.*, sum of Civilian Freight, line 44, and Military Freight, line 45.
23. Water: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 44.
24. Coastwise: *Ibid.*
25. Lakewise: *Ibid.*
26. Internal: *Ibid.*
27. Local: estimated by Transportation Policy Associates.
28. Pipeline: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 44.
29. ICC-Regulated: Estimated to be 84% of total pipeline.
30. Non-regulated: Estimated to be 16% of total pipeline.

Figure 5. Number of Vehicles, 1991

1. Domestic Transportation: Sum of Highway, Local Transit, Rail, Air, and Water.
2. Highway: Sum of Auto, Truck, and Bus.
3. Auto: Sum of Personal Passenger Car and Motorcycle.
4. Personal Passenger Car (includes Taxi): U.S. DOT/FHWA, *Highway Statistics*, 1991, Table VM-1. This figure includes private and commercial automobiles (including taxicabs) for the 50 states and the District of Columbia.
5. Motorcycle: *Ibid.* This figure includes private and commercial motorcycles.
6. Truck: Sum of Private Truck, Public Truck, and Recreational Vehicles.
7. Private: U.S. DOT/FHWA, *Highway Statistics*, 1991, Table MV-9.
8. Public: *Ibid.*
9. Recreational Vehicles: American Automobile Manufacturer's Association (AAMA), *Facts and Figures*, 1992, p. 8.
10. Bus: Sum of Intercity Bus and School Bus.
11. Intercity Bus: ICC, *Annual Report of the ICC*, 1992, p. 6.
12. School Bus: National Safety Council, *Accident Facts*, 1992, p. 71.
13. Local Transit: APTA, *Transit Fact Book*, 1992, p. 26.
14. Motor Bus: *Ibid.*
15. Heavy Rail: *Ibid.*
16. Light Rail: *Ibid.*
17. Trolley Bus: *Ibid.*
18. Demand Response: *Ibid.*
19. Ferryboat: *Ibid.*
20. Other: *Ibid.*
21. Commuter Rail: *Ibid.*
22. Rail: Sum of Freight and Amtrak.
23. Rail, Freight: AAR, *Railroad Facts*, 1992, p. 50.
24. Amtrak: Amtrak, State and Local Affairs Department.
25. Air: Sum of General Aviation and Air Carrier.
26. General Aviation: U.S. DOT/Federal Aviation Administration (FAA), Office of Management Systems, *General Aviation Activity and Avionics Survey*, 1991, Table 3.1.
27. Business: *Ibid.*, includes Business and Corporate Transportation.
28. Commercial: *Ibid.*, includes Air Taxi, Commuter Carrier, Aerial Application, and Aerial Observation.
29. Instructional: *Ibid.*
30. Personal: *Ibid.*
31. Other: *Ibid.*, includes Other and Other Work.
32. Air Carrier: Includes domestic and international aircraft; sum of Major, National and Regional airlines.
33. Total Majors: U.S. DOT/RSPA, Data Administration Division, DAI-20.
34. Total Nationals: *Ibid.*
35. Total Regionals: *Ibid.*, includes Large and Medium Regional airlines.
36. Water: U.S. Department of Army, Corps of Engineers, *Summary of U.S. Flag Passenger and Cargo Vessels*, January 1, 1990 - June 30, 1991.
37. Self-Propelled: *Ibid.*, Also includes dry cargo, passenger, railroad car ferrier, and tankers.
38. Non-Self-Propelled: *Ibid.*, Also includes railroad car fleets.

Figure 6. Number of Fatalities, 1991

1. Domestic Transportation: Sum of Highway, Rail Rapid Transit, Rail, Air, Water, and Pipeline.
2. Highway: Sum of Auto, Truck, Bus, Bicycle, Pedestrian, and Other. Also includes Rail/Highway Grade Crossing fatalities.
3. Auto: Sum of Personal Passenger Car, Taxi, and Motorcycle.
4. Personal Passenger Car: U.S. DOT/NHTSA/National Center for Statistics and Analysis, NRD-30.
5. Taxi: *Ibid.*
6. Motorcycle: *Ibid.*
7. Truck: Sum of Light Truck, Medium Truck, and Heavy Truck.
8. Light: U.S. DOT/NHTSA/National Center for Statistics and Analysis, NRD-30.
9. Medium: *Ibid.*
10. Heavy: *Ibid.*
11. Bus: Sum of commercial and school bus occupant fatalities.
12. Commercial Bus: U.S. DOT/NHTSA/National Center for Statistics and Analysis, NRD-30.
13. School Bus: *Ibid.*
14. Bicycle: *Ibid.*
15. Pedestrian: *Ibid.*, motor vehicle involvement only.
16. Other: *Ibid.*, includes nonoccupant fatalities, does not include bus fatalities.
17. Rail-Highway Grade Crossing: U.S. DOT/FRA, Systems Support Division, RRS-22.
18. Rail Rapid Transit: *Ibid.*, RSPA/Volpe National Transportation Systems Center, DTS-38.
19. Rail: *Ibid.*, FRA, Systems Support Division, RRS-22, (includes railroad passengers, employees, trespassers, and others killed in railroad operations). Does not include those killed in rail/highway grade crossing accidents.
20. Air: Sum of General Aviation and Air Carrier.
21. General Aviation: National Transportation Safety Board (NTSB), RE-50.
22. Corporate: *Ibid.*
23. Aerial Application: *Ibid.*
24. Business: *Ibid.*
25. Instructional: *Ibid.*
26. Personal: *Ibid.*
27. Other: *Ibid.*
28. Air: *Ibid.*, NTSB Aviation Accident Statistics, 1982-1992. Air Carriers operating under 14 CFR 121 and 14 CFR 135 (commuter air carriers and on-demand air taxis). Includes domestic and international operations.
29. Air Carrier: *Ibid.*, Airlines operating under 14 CFR 121, scheduled and nonscheduled services.
30. Commuter: *Ibid.*, Air Carriers operating under 14 CFR 135.
31. Air Taxi: *Ibid.*, On-Demand Air Carriers operating under 14 CFR 135.
32. Water: Sum of Waterborne and Recreational Boating.
33. Waterborne: U.S. DOT/USCG, Marine Safety Evaluation Branch, G-MMI-3.
34. Recreational Boating: *Ibid.*, *Boating Statistics*, 1992.
35. Pipeline (includes Liquid and Gas Pipeline): U.S. DOT/RSPA, Office of Pipeline Safety, DPS-35.

Figure 7. Energy Consumed in Transportation, 1991

1. Domestic Transportation: Sum of Highway, Local Transit, Rail, Air, and Water. Pipeline not included in Total.
2. Highway: Sum of Auto, Truck, and Bus.
3. Auto: Sum of Personal Passenger Car and Motorcycle.
4. Personal Passenger Car (includes Taxi): U.S. DOT/FHWA, *Highway Statistics*, 1991, Table VM-1.
5. Motorcycle: *Ibid.*
6. Truck: Sum of Single-Unit, Other-Single-Unit, and Combination.
7. Single-Unit: U.S. DOT/FHWA, *Highway Statistics*, 1991, Table VM-1.
8. Other Single-Unit: *Ibid.*
9. Combination: *Ibid.*
10. Bus: Sum of Intercity, School Bus and Local Bus.
11. Intercity Bus: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 56. Derived by multiplying figure in source by 42.
12. School Bus: *Ibid.*
13. Local Bus: *Ibid.*
14. Local Transit: APTA, *Transit Fact Book*, 1992, Table 54.
15. Rail: Sum of Passenger and Class I Rail Freight.
16. Rail, Passenger: Sum of Class I Passenger and Amtrak.
17. Rail, Class I Passenger: AAR, *Railroad Ten-Year Trends*, Volume 9, p. 139.
18. Amtrak: Amtrak, State and Local Affairs Department.
19. Rail, Class I Freight: AAR, *Railroad Ten-Year Trends*, Volume 9, p. 139.
20. Air: Sum of Air Carrier and General Aviation.
21. General Aviation: U.S. DOT/FAA, *General Aviation Activity and Avionics Survey*, 1991, Table 5.1. Figure derived by the addition of jet fuel and aviation gasoline.
22. Air Carrier: U.S. DOT/RSPA, Data Administration Division, DAI-20.
23. Water: U.S. DOT/FHWA, *Highway Statistics*, 1991, Table MF-24.
24. Pipeline (Natural Gas): U.S. Department of Energy (DOE), Energy Information Administration (EIA), *Natural Gas Annual*, 1991, Table 16.

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2. American Public Transit Association, *Transit Fact Book*, 1985, 1992.
3. Amtrak, State and Local Affairs Department.
4. Association of American Railroads, *Railroad Facts*, 1976, 1992.
5. *Ibid.*, *Analysis of Class 1 Railroads*, 1980 (Series 3), 1991 (Series 14).
6. CAB, *Air Carrier Traffic Statistics*, December 1981.
7. *Ibid.*, *Air Carrier Financial Statistics*, December 1981.
8. *Ibid.*, *Handbook of Aviation Statistics*, 1969, 1973.
9. Eno Foundation for Transportation, *Transportation In America*, 1993.
10. Federal Energy Regulatory Commission (FERC).
11. Interstate Commerce Commission, Bureau of Accounts and Statistics, *Annual Report of the ICC*, 1961, 1971, 1981, 1991, 1992.
12. American Automobile Manufacturers Association of the U.S., Inc., *Facts and Figures*, 1992.
13. National Safety Council, *Accident Facts*, 1992.
14. National Transportation Safety Board, RE-50.
15. *Ibid.*, *NTSB Aviation Accident Statistics*, 1992.
16. Transportation Policy Associates.
17. U.S. Army, Corps of Engineers, *Summary of U.S. Flag Passenger & Cargo Vessels*, 1960, 1970, 1980, 1990, 1991.
18. *Ibid.*, *Waterborne Commerce of the United States*, Part 5, 1980.
19. U.S. Coast Guard, *Boating Statistics*, 1992.
20. *Ibid.*, Marine Safety Evaluation Branch, G-MM1-3.
21. U.S. Department of Commerce, Bureau of Economic Analysis.
22. *Ibid.*, *Survey of Current Business*, July issues.
23. U.S. Department of Energy/EIA, *Natural Gas Annual*, 1991.
24. *Ibid.*, *Statistics of Interstate Natural Gas Pipeline Companies*, annual issues.
25. U.S. Department of Justice, Immigration and Naturalization Service, *Report of Passenger Travel Between the U.S. and Foreign Countries*, 1960, 1970.
26. U.S. Department of Labor, Bureau of Labor Statistics, *Supplement to Employment and Earnings, Revised Establishment Data*, 1979, 1984, 1992.
27. U.S. Department of Transportation (DOT)/Federal Aviation Administration, Office of Management Systems, *General Aviation Activity and Avionics Survey*, 1990, 1991.
28. U.S. DOT/Federal Highway Administration (FHWA), Office of Highway Information Management, *Highway Statistics*, 1960, 1970, 1980, 1990, 1991.
29. *Ibid.*, *Highway Statistics, Summary to 1985*.
30. U.S. DOT/Maritime Administration (MARAD), *Merchant Fleets of the World*, annual issues.

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31. *Ibid.*, Office of External Affairs, MAR-240.
32. U.S. DOT/National Highway Traffic Safety Administration (NHTSA), National Center for Statistics and Analysis, NRD-30.
33. U.S. DOT/Federal Railroad Administration (FRA), Systems Support Division, RRS-22.
34. U.S. DOT/Research and Special Programs Administration (RSPA), *Air Carrier Traffic Statistics*, December 1991/1990, 1992/1991.
35. *Ibid.*, *Air Carrier Financial Statistics*, December 1991/1990, 1992/1991.
36. *Ibid.*, Data Administration Division, DAI-20.
37. *Ibid.*, Office of Pipeline Safety, DPS-35.
38. *Ibid.*, *U.S. International Air Travel Statistics*, annual issues.
39. U.S. DOC/NOAA, National Marine Fisheries Service.

TABLE REFERENCES

Table 1. Average Passenger Revenue Per Passenger Mile, 1960-1991

Certificated Air Carrier, Domestic Operations, Scheduled Service:

- 1960-1972: Civil Aeronautics Board (CAB), *Handbook of Airline Statistics*, 1969, 1973.
- 1973-1982: *Ibid.*, *Air Carrier Financial Statistics*, 1974-1983, annual issues, p. 2, lines 1, 2, and 3; *Air Carrier Traffic Statistics*, 1979-1983, annual issues, p. 4/5, lines 7, 8, and 9. To compute Total, First Class, and Coach plus economy figures, divide line 1 by line 7, line 2 by line 8, and line 3 by line 9.
- 1983-1991: U.S. Department of Transportation (DOT) Research and Special Programs Administration (RSPA), *Air Carrier Financial Statistics*, annual issues, 1984-1992, p. 1, lines 1, 2 and 3; *Air Carrier Traffic Statistics*, annual issues, 1984-1992, p. 2, lines 7, 8, and 9.

Commuter I Rail:

- 1960-1991: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 50.

Intercity/Amtrak:

- 1960-1970: Association of American Railroads, (AAR), *Railroad Facts*, annual issues.
- 1971-1991: Amtrak, State and Local Affairs Department.

Class I Bus Intercity:

- 1960-1969: Interstate Commerce Commission, (ICC), *Transport Economics*, annual issues.
- 1970-1982: American Bus Association (ABA), *Bus Facts*, annual issues.
- 1983-1985: ICC, *Transport Statistics in U.S., Motor Carriers*, Part 2, annual issues.
- 1986-1991: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 50.

Consumer Price Index:

- 1960-1991: Council of Economic Advisors, *Economic Report of the President*, annual issues.

Table 2. Average Freight Revenue Per Ton-Mile, 1960-1991

Certificated Air Carrier, Domestic Operations, Scheduled Service:

- 1960-1972: CAB, *Handbook of Airline Statistics*, 1969, 1973.
- 1973-1982: *Ibid.*, *Air Carrier Financial Statistics*, 1974-1983, annual issues, p. 2, line 4; *Air Carrier Traffic Statistics*, 1979-1983, annual issues, p. 4/5, line 18. Freight revenue (Financial Statistics) divided by revenue ton-miles of freight (Traffic Statistics).
- 1983-1991: U.S. DOT/RSPA, *Air Carrier Financial Statistics*, 1984-1992, annual issues, p. 1, line 4; *Air Carrier Traffic Statistics*, 1984-1992, annual issues, p. 2, line 18. Freight revenue (Financial Statistics) divided by revenue ton-miles of freight (Traffic Statistics).

Class I Rail:

- 1960-1991: AAR, *Railroad Facts*, 1992, p. 30, and similar table in earlier editions.

Class I Intercity Motor Carriers of Property:

- 1960-1991: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 49 and similar table in earlier editions published by Transportation Policy Associates.

Oil Pipeline:

- 1960-1991: *Ibid.*

Inland Waterway Carrier:

- 1960-1991: *Ibid.*

Producer Price Index:

- 1960-1991: Council of Economic Advisors, *Economic Report of the President*, annual issues.

Table 3. Average Passenger Fare, 1960-1991

Certificated Air Carrier, Domestic Operations, Scheduled Service:

- 1960-1972: CAB, *Handbook of Airline Statistics*, 1969, 1973.
1973-1982: *Ibid.*, *Air Carrier Financial Statistics*, 1974-1983, annual issues, p. 1, line 3 and *Air Carrier Traffic Statistics*, 1979-1983, annual issues, p. 2, line 16, passenger revenue (Financial Statistics) divided by revenue passenger enplanements (Traffic Statistics).
1983-1991: U.S. DOT/RSPA, *Air Carrier Financial Statistics*, 1984-1992, annual issues, p. 1, line 3 and *Air Carrier Traffic Statistics*, 1984-1992, annual issues, p. 2, line 16, passenger revenue (Financial Statistics) divided by revenue passenger enplanements (Traffic Statistics).

Class I Bus Intercity:

- 1960-1981: ABA, *Bus Facts*, annual issues.
1982-1991: Transportation Policy Associates (TPA).

Local Transit:

- 1960-1991: American Public Transit Association (APTA), *Transit Fact Book*, 1992, p. 56, and similar table in earlier editions.

Commuter Rail:

- 1960-1991: *Ibid.*

Intercity/Amtrak:

- 1960-1970: AAR, *Railroad Facts*, annual issues.
1971-1991: Amtrak, State and Local Affairs Department.

Table 4. Total Operating Revenues, 1960-1991

Certificated Air Carrier, Domestic Operations, All Services:

- 1960-1972: CAB, *Handbook of Airline Statistics*, 1969, 1973.
1973-1982: *Ibid.*, *Air Carrier Financial Statistics*, 1974-1983, annual issues, p. 1.
1983-1991: U.S. DOT/RSPA, *Ibid.*, 1984-1992, annual issues, p. 1.

Class I Bus, Intercity:

- 1960-1991: ICC, *Transport Statistics in U.S., Motor Carriers, Part 2*, December 1991, Table 5 and similar table in earlier editions.

Local Transit:

- 1960-1991: APTA, *Transit Fact Book*, 1992, Table 20, and similar table in earlier editions.

Oil Pipeline, ICC-Regulated and Non-Regulated:

- 1960-1991: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 40 and previous issues published by TPA.

Gas Pipeline:

- 1965-1991: Transmission Companies: American Gas Association (AGA), *Gas Facts*, 1992, p. 148, and similar table in earlier editions.
1971-1991: Distribution Companies: *Ibid.*, p. 147.

Class I Intercity Motor Carriers of Property:

- 1960-1991: ICC, *Annual Report of the ICC*, 1992, Appendix E, and similar table in earlier editions.

Class I Rail:

- 1960-1991: AAR, *Railroad Facts*, 1992, p. 12, and similar table in earlier editions.

Intercity/Amtrak:

- 1960-1970: *Ibid.*
1971-1991: Amtrak, State and Local Affairs Department.

Table 4. Total Operating Revenues, 1960-1991 (cont'd)

Water Transport:

ICC-Regulated Carriers, Inland and Coastal Waterways:

1960-1991: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 53 and previous issues published by TPA.

Maritime Carriers:

1960-1991: U.S. DOT/Maritime Administration, Office of External Affairs, MAR-240.

Class A Freight Forwarders:

1960-1991: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 53 and previous issues published by TPA.

Table 5. Vehicle-Miles, 1960-1991

Air Carrier:

Certificated, Domestic Operations, All Services:

1960-1972: CAB, *Handbook of Airline Statistics*, 1969, 1973.

1973-1982: *Ibid.*, *Air Carrier Traffic Statistics*, 1974-1983, annual issues, p. 2, line (27) plus line (50).

1983-1991: U.S. DOT/RSPA, *Ibid.*, annual issues, 1984-1992, p. 2, line (27) plus line (50).

General Aviation:

1960-1982: U.S. DOT/Federal Aviation Administration (FAA), *FAA Statistical Handbook of Aviation*, annual issues.

1983-1991: *Ibid.*, *General Aviation Activity and Avionics Survey*, annual issues, Table 3.3; mileage multiplied by 1.151 to convert from nautical miles.

Highway:

Passenger Car and Taxi:

1960-1984: U.S. DOT/Federal Highway Administration (FHWA), *Highway Statistics, Summary to 1985*, Table VM-201A.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

Motorcycle:

1966-1984: *Ibid.*, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

Single-Unit Truck:

1960-1984: *Ibid.*, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

Other Single-Unit Truck:

1966-1984: *Ibid.*, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

Combination Truck:

1960-1984: *Ibid.*, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

Commercial Bus:

1960-1983: *Ibid.*, *Highway Statistics*, annual issues.

1984-1991: Transportation Policy Associates.

School Bus:

1960-1965: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1966-1976: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

1977-1991: National Safety Council, *Accident Facts*, annual issues, p. 71.

Table 5. Vehicle-Miles, 1960-1991 (cont'd)

Local Transit:	
1960-1991:	APTA, <i>Transit Fact Book</i> , 1992, Table 39, and similar table in earlier editions.
Commuter Rail:	
1975-1991:	<i>Ibid.</i>
Class Rail 1 Freight Car:	
1960-1991:	AAR, <i>Railroad Facts</i> , 1992, p. 34.
Intercity/Amtrak:	
1960-1970:	<i>Ibid.</i> , p. 40.
1971-1991:	Amtrak, State and Local Affairs Department.

Table 6. Passenger-Miles, 1960-1991

Air Carrier:	
Certificated, Domestic Operations, All Services:	
1960-1972:	CAB, <i>Handbook of Airline Statistics</i> , 1969, 1973.
1973-1982:	<i>Ibid.</i> , <i>Air Carrier Traffic Statistics</i> , 1974-1983, p. 2, line 1.
1983-1991:	U.S. DOT/RSPA, <i>Ibid.</i> , annual issues, 1984-1992, p. 2, line 1.
General Aviation:	
1960-1991:	Eno Foundation for Transportation, <i>Transportation In America</i> , 1993, p. 47, and similar table in earlier editions published by TPA.
Highway:	
Passenger Car and Taxi:	
1960-1984:	U.S. DOT/FHWA, <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985-1991:	<i>Ibid.</i> , <i>Highway Statistics</i> , annual issues, Table VM-1.
Motorcycle:	
1966-1991:	Derived by multiplying vehicle-miles by vehicle occupancy rates estimated from DOT/FHWA's Nationwide Personal Transportation Surveys.
Intercity Bus:	
1960-1991:	Eno Foundation for Transportation, <i>Transportation In America</i> , 1993, p. 47.
School Bus:	
1980-1991:	National Safety Council, <i>Accident Facts</i> , 1992, p. 70, and similar table in earlier editions.
Single-Unit Truck:	
1966-1991:	Derived by multiplying vehicle-miles by vehicle occupancy rates estimated from DOT/FHWA's Nationwide Personal Transportation Surveys.
Other Single-Unit Truck:	
1966-1991:	<i>Ibid.</i>
Combination Truck:	
1960-1991:	<i>Ibid.</i>
Local Transit:	
1977-1991:	APTA, <i>Transit Fact Book</i> , 1992, Table 38, and similar table in earlier editions.
Commuter Rail:	
1960-1975:	AAR, <i>Railroad Facts</i> , 1976, p. 32.
1976-1991:	APTA, <i>Transit Fact Book</i> , 1992, Table 38, and similar table in earlier editions.

Table 6. Passenger-Miles, 1960-1991 (cont'd)

Intercity/Amtrak:	
1960-1980:	AAR, <i>Railroad Facts</i> , annual issues.
1981-1991:	Amtrak, State and Local Affairs Department.

Table 7. Revenue Ton-Miles of Freight, 1960-1991

Certificated Air Carrier, Domestic Operations, All Services:	
1960-1972:	CAB, <i>Handbook of Airline Statistics</i> , 1969, 1973.
1973-1982:	<i>Ibid.</i> , <i>Air Carrier Traffic Statistics</i> , 1974-1983, annual issues, p. 2, line 3.
1983-1991:	U.S. DOT/RSPA, <i>Ibid.</i> , annual issues, 1984-1992, p. 2, line 3.
Oil Pipeline:	
1960-1991:	Eno Foundation for Transportation, <i>Transportation In America</i> , 1993, p. 44 and similar table in earlier editions published by TPA.
Class I Rail:	
1960-1991:	AAR, <i>Railroad Facts</i> , p. 27, and similar table in earlier editions.
Trucks	
Intercity:	
1960-1991:	Eno Foundation for Transportation, <i>Transportation In America</i> , 1993, p. 44, and similar table in earlier editions published by TPA.
Local:	
1960-1991:	Transportation Policy Associates.
Water Transportation:	
Inland Waterways, including Great Lakes:	
1960-1989:	U.S. Army, Corps of Engineers, <i>Waterborne Commerce of the U.S.</i> , annual issues, Part 5, Section 1, Table 6 and similar table in earlier editions.
1990-1991:	Eno Foundation for Transportation, <i>Transportation In America</i> , 1993, p. 44, and similar table in earlier editions published by TPA.
Inland Waterways (domestic only):	
1960-1989:	U.S. Army, Corps of Engineers, <i>Waterborne Commerce of the U.S.</i> , annual issues, Part 5, Section 1, Table 6 and similar table in earlier editions.
1990-1991:	Eno Foundation for Transportation, <i>Transportation In America</i> , 1993, p. 44, and similar table in earlier editions published by TPA.
Domestic Coastwise:	
1960-1989:	U.S. Army, Corps of Engineers, <i>Waterborne Commerce of the U.S.</i> , annual issues, Part 5, Section 1, Table 6 and similar table in earlier editions.
1990-1991:	Eno Foundation for Transportation, <i>Transportation In America</i> , 1993, p. 44, and similar table in earlier editions published by TPA.

Table 8. Basic Intercity Mileage Within the Continental United States, 1960-1991

Airway:	
1960-1991:	U.S. DOT/FAA, <i>FAA Statistical Handbook of Aviation</i> , annual issues. Mileage equals sum of VHF low altitude direct and VHF jet route mileages multiplied by 1.151 to convert from nautical miles.
Oil Pipeline, Total:	
1960-1991:	Eno Foundation for Transportation, <i>Transportation In America</i> , 1993, p. 64, and similar table in earlier editions published by TPA.
Crude Lines and Product Lines:	
1960-1991:	Transportation Policy Associates.

Table 8. Basic Intercity Mileage Within the Continental United States, 1960-1991 (cont'd)

Gas Pipeline:	
1960-1991:	American Gas Association (AGA), <i>Gas Facts</i> , 1992, Table 5-1 and similar table in earlier editions.
Class I Rail:	
1960-1991:	AAR, <i>Railroad Facts</i> , annual issues, p. 44, and similar table in earlier editions. Data represent aggregate length of roadway, excluding yard tracks, sidings and parallel lines. Jointly used track is counted only once.
Highway:	
1960-1991:	U.S. DOT/FHWA, <i>Highway Statistics</i> , annual issues, Table HM-14 and similar table in earlier editions.
Inland Waterway:	
1960-1991:	Eno Foundation for Transportation, <i>Transportation In America</i> , 1993, p. 64 and similar table in earlier editions.

Table 10. Number of Vehicles, 1960-1991

Certificated Air Carrier, All Services:	
1960-1991:	U.S. DOT/RSPA, Data Administration Division, DAI-20.
General Aviation:	
1960-1982:	<i>Ibid.</i> , FAA, <i>FAA Statistical Handbook of Aviation</i> , annual issues.
1983-1991:	<i>Ibid.</i> , <i>General Aviation Activity and Avionics Survey</i> , annual issues, Table 3.1.
Motorcycle:	
1960-1965:	<i>Ibid.</i> , FHWA, <i>Highway Statistics</i> , annual issues, Table VM-1.
1966-1984:	<i>Ibid.</i> , <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985-1991:	<i>Ibid.</i> , <i>Highway Statistics</i> , annual issues, Table VM-1.
Passenger Car & Taxi:	
1960-1984:	<i>Ibid.</i> , <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985-1991:	<i>Ibid.</i> , <i>Highway Statistics</i> , annual issues, Table VM-1.
Truck:	
Combination and Single-Unit:	
1963-1984:	<i>Ibid.</i> , <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985-1991:	<i>Ibid.</i> , <i>Highway Statistics</i> , annual issues, Table VM-1.
Intercity Bus:	
1960-1979:	ABA, <i>Bus Facts</i> , annual issues.
1980-1983:	<i>Ibid.</i> , Public Affairs Office.
1984-1991:	Transportation Policy Associates.
Local Transit and Commuter Rail:	
1960-1991:	APTA, <i>Transit Fact Book</i> , 1992, Table 41, and similar table in earlier editions.
Class I Rail:	
Freight Cars and Locomotives:	
1960-1991:	AAR, <i>Railroad Facts</i> , 1992, pp. 48, 50, and similar table in earlier editions. Excludes Amtrak.
Amtrak:	
Passenger Train-Cars and Locomotives:	
1971-1991:	Amtrak, State and Local Affairs Department.
Water Transport:	
Total Inland Water Vessels:	
1960-1991:	Sum of non-self-propelled vessels and self-propelled vessels.

Table 10. Number of Vehicles, 1960-1991 (cont'd)

Non-Self-Propelled Vessels and Self-Propelled Vessels:

- 1960-1980: U.S. Army, Corps of Engineers, *Summary of U.S. Flag Passenger & Cargo Vessels*, annual issues.
- 1981-1982: *Ibid.*, 1981 data are included in 1982 figure.
- 1983-1984: *Ibid.*, 1983 data are included in 1984 figure.
- 1985-1989: *Ibid.*
- 1990-1991: *Ibid.*, January 1, 1991 - June 30, 1991 data included in 1990 figure.

Oceangoing Steam and Motor Ships:

- 1960-1991: U.S. DOT/Maritime Administration (MARAD), *Merchant Fleets of the World*, annual issues, Table 6 and similar table in earlier editions.

Table 11. Number of New Vehicles Purchased by Mode, 1960-1991

Air Carrier, All Services:

- 1960-1991: Aerospace Industries Association, *1992 Aerospace Year-End Review and Forecast*, Table V, and similar table in previous editions.

General Aviation:

- 1960-1991: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, 1991, Table 10-1 and similar table in earlier editions.

Passenger Car and Taxi:

- 1960-1991: U.S. DOC, Bureau of Economic Analysis, *Survey of Current Business*, January issues, p. S-32 and similar table in earlier editions.

Motorcycle:

- 1969-1991: Motorcycle Industry Council, Inc., *1992 Motorcycle Statistical Annual*, p. 10, and similar table in earlier editions.

Moped:

- 1974-1991: *Ibid.*, p. 16.

Bicycle:

- 1968-1991: Bicycle Manufacturer's Association of America, *The Bicycle Market in Review*, annual issues.

Truck:

- 1960-1991: U.S. DOC, Bureau of Economic Analysis, *Survey of Current Business*, January issues, p. S-32 and similar table in earlier editions. Total of light, medium and heavy duty.

Bus (including School Bus):

- 1960-1991: American Automobile Manufacturers Association, *Facts & Figures*, 1992, p. 8 and similar table in earlier editions.

Local Transit and Commuter Rail:

- 1960-1991: APTA, *Transit Fact Book*, 1992, Table 41, and similar table in earlier editions.

Class I Rail:

Freight Car and Locomotive:

- 1960-1991: AAR, *Railroad Facts*, 1992, p. 54, and similar table in earlier editions.

Amtrak:

Passenger Train-Car and Locomotive:

- 1972-1982: *Ibid.*, p. 17, and similar table in earlier editions.
- 1983-1991: Amtrak, State and Local Affairs Department.

Table 11. Number of New Vehicles Purchased by Mode, 1960-1991 (cont'd)

Water Transport:

Merchant Vessel and Gross Tonnage:

1960-1991: U.S. DOT/MARAD, *Merchant Fleets of the World*, annual issues, p. 50 and similar table in earlier editions.

Table 17. Number of Fatalities, Injuries, and Accidents by Transportation Mode, 1960-1992

Fatalities

Aviation:

U.S. Air Carrier:

1960-1967: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.

1968-1977: *Ibid.*, RSPA/Volpe National Transportation Systems Center (Volpe Center), *Transportation Safety Information Report*, annual issues.

1978-1992: National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 2.

Commuter Air Carrier:

1966-1974: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, 1975, 1978.

1975-1977: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

1978-1992: NTSB, *NTSB Aviation Accident Statistics*, annual issues, Table 5.

On-Demand Air Taxi:

1966-1974: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, 1975, 1978.

1975-1977: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

1978-1992: NTSB, *NTSB Aviation Accident Statistics*, annual issues, Table 6.

General Aviation:

1960-1967: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.

1968-1977: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

1978-1992: NTSB, *NTSB Aviation Accident Statistics*, annual issues, Table 7.

Highway:

Motor Vehicle Traffic:

1960-1974: National Safety Council, *Accident Facts*, 1992.

1975-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

1991-1992: *Ibid.*, NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

Rail:

Railroad:

1960-1967: National Safety Council, *Accident Facts*, 1974.

1968-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

1991-1992: *Ibid.*, FRA, Systems Support Division, RRS-22.

Rail-Highway Grade Crossing:

1960-1967: National Safety Council, *Accident Facts*, 1974.

1968-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

1991-1992: *Ibid.*, FRA, Systems Support Division, RRS-22.

Rail Rapid Transit:

1976-1990: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

1991-1992: *Ibid.*, Safety and Security Systems Division, DTS-38.

Waterborne Transport:

1968-1990: *Ibid.*, *Transportation Safety Information Report*, annual issues.

1991: *Ibid.*, USCG, Marine Safety Evaluation Branch, G-MM1-3.

Table 17. Number of Fatalities, Injuries, and Accidents by Transportation Mode, 1960-1992 (cont'd)

Recreational Boating:

- 1960-1967: *Ibid.*, USCG, *Boating Statistics*, annual issues.
- 1968-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, USCG, *Boating Statistics*, 1992, p. 6.

Gas Pipeline:

- 1970-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, Office of Pipeline Safety, DPS-35.

Liquid Pipeline:

- 1968-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, Office of Pipeline Safety, DPS-35.

Hazardous Materials:

- 1971-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, Office of Hazardous Materials Transportation, DHM-63.

Injuries

Aviation:

U.S. Air Carrier:

- 1969-1972: National Safety Council, *Accident Facts*, 1970, 1971, 1973.
- 1973-1977: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1978-1992: NTSB, *NTSB Aviation Accident Statistics*, Table 2.

Commuter Air Carrier:

- 1979-1992: *Ibid.*, Table 5.

On-Demand Air Taxi:

- 1979-1992: *Ibid.*, Table 6.

General Aviation:

- 1975-1977: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1978-1992: NTSB, *NTSB Aviation Accident Statistics*, Table 7.

Highway:

Motor Vehicle Traffic:

- 1969-1992: National Safety Council, *Accident Facts*, annual issues.

Rail:

Railroad:

- 1960-1976: *Ibid.*, 1974, 1984.
- 1977-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1991-1992: *Ibid.*, FRA, Systems Support Division, RRS-22.

Rail-Highway Grade Crossing:

- 1960-1976: National Safety Council, *Accident Facts*, 1974, 1984.
- 1977-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1991-1992: *Ibid.*, FRA, Systems Support Division, RRS-22.

Rail Rapid Transit:

- 1976-1990: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1991-1992: *Ibid.*, Safety and Security Systems Division, DTS-38.

Waterborne Transport:

- 1970-1990: *Ibid.*, *Transportation Safety Information Report*, annual issues.
- 1991: *Ibid.*, USCG, Marine Safety Evaluation Branch, G-MM1-3.

Table 17. Number of Fatalities, Injuries, and Accidents by Transportation Mode, 1960-1992 (cont'd)

Recreational Boating:

- 1960-1967: *Ibid.*, USCG, *Boating Statistics*, annual issues.
- 1968-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, USCG, *Boating Statistics*, 1992, p. 9.

Gas Pipeline:

- 1979-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, Office of Pipeline Safety, DPS-35.

Liquid Pipeline:

- 1979-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, Office of Pipeline Safety, DPS-35.

Hazardous Materials:

- 1975-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, Office of Hazardous Materials Transportation, DHM-63.

Accidents/Incidents

Aviation:

U.S. Air Carrier:

- 1960-1967: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.
- 1968-1977: *Ibid.*, RSPA/Volpe National Transportation Systems Center (Volpe Center), *Transportation Safety Information Report*, annual issues.
- 1978-1992: National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 2.

Commuter Air Carrier:

- 1966-1976: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, 1975, 1978, 1985.
- 1977-1992: NTSB, *NTSB Aviation Accident Statistics*, annual issues, Table 5.

On-Demand Air Taxi:

- 1966-1976: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, 1975, 1978.
- 1977-1992: NTSB, *NTSB Aviation Accident Statistics*, annual issues, Table 6.

General Aviation:

- 1960-1967: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.
- 1968-1977: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1978-1992: NTSB, *NTSB Aviation Accident Statistics*, annual issues, Table 7.

Highway:

Motor Vehicle Traffic:

- 1960-1992: National Safety Council, *Accident Facts*, annual issues.

Rail:

Railroad:

- 1968-1990: U.S. DOT/RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1991-1992: *Ibid.*, FRA, Systems Support Division, RRS-22.

Rail-Highway Grade Crossings:

- 1960-1976: *Ibid.*, *Rail-Highway Grade Crossing Accidents*, annual issues. Data not comparable after 1974 due to change in reporting requirements.
- 1977-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.

Rail Rapid Transit:

- 1976-1990: *Ibid.*
- 1991-1992: *Ibid.*, Safety and Security Systems Division, DTS-38.

Table 17. Number of Fatalities, Accidents, and Injuries by Transportation Mode, 1960-1992 (cont'd)

Waterborne Transport:

- 1968-1990: *Ibid.*, *Transportation Safety Information Report*, annual issues.
- 1991: *Ibid.*, USCG, Marine Safety Evaluation Branch, G-MM1-3.

Recreational Boating:

- 1960-1967: *Ibid.*, USCG, *Boating Statistics*, annual issues.
- 1968-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, USCG, *Boating Statistics*, 1992, p. 9.

Gas Pipeline:

- 1970-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, Office of Pipeline Safety, DPS-35.

Liquid Pipeline:

- 1968-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, Office of Pipeline Safety, DPS-35.

Hazardous Materials:

- 1971-1991: *Ibid.*, RSPA/Volpe Center, *Transportation Safety Information Report*, annual issues.
- 1992: *Ibid.*, Office of Hazardous Materials Transportation, DHM-63.

Table 57. Employment in Transportation and Related Industries, 1960-1992

Transport Sector:

Air:

- 1960-1975: U.S. Department of Labor (DOL), Bureau of Labor Statistics, *Employment and Earnings*, 1979, SIC 45.
- 1980-1992: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, annual issues, SIC 45.

Bus (intercity):

- 1960-1975: *Ibid.*, *Employment and Earnings*, 1979, SIC 45.
- 1980-1992: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, annual issues, SIC 413.

Local Transport:

- 1960-1975: *Ibid.*, *Employment and Earnings*, 1979, SIC 45.
- 1980-1992: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, annual issues, SIC 411.

Railroad:

- 1960-1975: *Ibid.*, *Employment and Earnings*, 1979, SIC 45.
- 1980-1992: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, annual issues, SIC 40.

Oil Pipeline:

- 1960-1975: *Ibid.*, *Employment and Earnings*, 1979, SIC 45.
- 1980-1992: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, annual issues, SIC 46.
FERC-regulated companies employ approximately 85% of the total.

Gas Pipeline, Transmission and Distribution:

- 1960-1992: AGA, *Gas Facts*, 1992, Table 16-2 and similar table in earlier editions.

Taxi:

- 1960-1975: U.S. Department of Labor (DOL), Bureau of Labor Statistics, *Employment and Earnings*, 1979, SIC 45.
- 1980-1992: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, annual issues, SIC 412.

Trucking and Truck Terminals:

- 1960-1975: *Ibid.*, *Employment and Earnings*, 1979, SIC 45.
- 1980-1988: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, annual issues, SIC 421,3.
- 1989-1992: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, annual issues, SIC 42.

Table 57. Employment in Transportation and Related Industries, 1960-1992 (cont'd)

Water:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, SIC 44.
Equipment Manufacturing:	
Aircraft and Parts:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, SIC 372.
Motor Vehicles and Equipment:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, SIC 301 and 371, sum of motor vehicles and equipment and tires.
Railroad Equipment:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, SIC 374.
Ship and Boat Building and Repair:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, SIC 373.
Other:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, sum of SIC 376 and SIC 379.
Related Industries:	
Automotive and Accessories Retailers:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, SIC 551,2 and 553, sum of new and used automobile dealers and other auto and home supply stores.
Automotive Wholesalers:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, SIC 501.
Automotive Repair, Services, and Parking:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, SIC 75.
Gasoline Service Stations:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, SIC 554.
Highway and Street Construction:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, SIC 161.
Petroleum:	
1960-1975:	<i>Ibid.</i> , <i>Employment and Earnings</i> , 1979, SIC 45.
1980-1992:	<i>Ibid.</i> , <i>Supplement to Employment and Earnings, Revised Establishment Data</i> , annual issues, sum of SIC 13, p. 6, SIC 291 and 4.5% of SIC 50 and 51 (to account for petroleum bulk stations and terminals). The totals are adjusted for 56% transportation use.

Table 57. Employment in Transportation and Related Industries, 1960-1992 (cont'd)

Other Industries:

Truckdrivers and Deliverymen:

1960-1992: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 61 and similar table in earlier editions by TPA.

Shipping and Receiving Clerks:

1960-1992: *Ibid.*, p. 62 and similar table in earlier editions by TPA.

Government Employment:

U.S. DOT

1960-1991: U.S. DOC, Bureau of the Census, *Statistical Abstract of the U.S.*, 1992, Table 514 and similar table in earlier editions.

1992: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 61, and similar table in earlier editions.

State and Local Highway:

1960-1991: U.S. DOC, Bureau of the Census, *Statistical Abstract of the U.S.*, 1992, Table 482, and similar table in earlier editions.

1992: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 61 and similar table in earlier editions.

U.S. Postal Service:

1960-1992: *Ibid.* Figures based on assumption that 14% of postal workers are engaged in transportation work, i.e., employees transporting or delivering mail by motor vehicles.

Other:

1960-1992: *Ibid.*

Total Civilian Labor Force:

1960-1991: U.S. DOC, Bureau of the Census, *Statistical Abstract of the U.S.*, 1992, Table 629, and similar table in earlier editions.

1992: Eno Foundation for Transportation, *Transportation In America*, 1993, p. 61 and similar table in earlier editions.

Table 58. National Transportation and Economic Trends, 1960-1991

Passenger-Miles:

1960-1991: Summation of all modes from Table 6. (This edition of NTS.)

Revenue Ton-Miles:

1960-1991: Summation of all modes from Table 7. (This edition of NTS.)

Population:

1960-1991: Council of Economic Advisors, *Economic Report of the President*, annual issues, Table B-29.

Industrial Production:

1960-1991: *Ibid.*, Table B-105.

Gross Domestic Product:

1960-1991: *Ibid.*, Tables B-6, B-7.

Table 65. Fuel Consumption by Mode of Transportation, 1960-1991

Class I Railroads:

Locomotives:

- 1960-1970: AAR, *Statistics of Class 1 Railroads*, September 1971, p. 15.
- 1975: *Ibid.*, *Railroad Ten-Year Trends*, 1986, Table III-D-2.
- 1980-1991: *Ibid.*, *Railroad Facts*, 1992, p. 60.

Certificated Air Carrier, Domestic Operations:

- 1960-1970: CAB, *Handbook of Airline Statistics*, 1971, pp. 66, 67.
- 1975: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, 1975, Table 6.27.
- 1980: CAB, *Fuel Cost and Consumption, Twelve Months Ended December 31, 1984*; Total of Tables 2, 3, 4, 6 and 7 and similar tables in earlier editions.
- 1985-1991: U.S. DOT/RSPA, Data Administration Division, DAI-20.

General Aviation:

- 1960-1980: *Ibid.*, FAA, *FAA Statistical Handbook of Aviation*, annual issues.
- 1985-1991: *Ibid.*, *General Aviation Activity and Avionics Survey*, annual issues, Table 5-1, and similar table in earlier editions.

Highway:

- 1960-1980: *Ibid.*, FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
- 1985-1991: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1. Commercial and School bus figures for 1984-1991 were calculated by the Transportation Policy Associates.

Water Transport:

Residual and Distillate Fuel Oil:

- 1960-1980: American Petroleum Institute, *Basic Petroleum Data Book*, annual issues, Tables 10, 10a, 12, and 12a.
- 1985-1991: U.S. DOE/EIA, *Fuel Oil and Kerosene Sales*, annual, Tables 2 and 4.

Gasoline:

- 1960-1991: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table MF-24 and similar table in earlier editions.

Transit:

Electricity:

- 1960-1991: APTA, *Transit Fact Book*, 1992, Tables 54, 55 and similar table in earlier editions.

Gallons of Motor Fuel:

- 1960-1991: *Ibid.*

Pipeline:

- 1960-1991: U.S. DOE, *Natural Gas Annual*, 1991, Table 97, and similar table in earlier editions.

Non-Highway Use of Gasoline:

- 1960-1991: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table MF-21 and similar table in earlier editions.

APPENDIX B

Glossary

AIR CARRIER

AIR CARRIER: The commercial system of air transportation consisting of certificated air carriers, air taxis (including commuters), supplemental air carriers, commercial operators of large aircraft and air travel clubs. The following define several types of air carriers:

- **Certificated Air Carrier** - One of a class of air carriers holding a Certificate of Public Convenience and Necessity issued by the U.S. Department of Transportation (DOT) to conduct scheduled services interstate. Nonscheduled or charter operations may also be conducted by these carriers. These carriers operate large (30 seats or more for a maximum load of 7,500 pounds or more) in accordance with FAR Part 121.
- **Supplemental Air Carrier** - One of a class of air carriers holding a Certificate of Public Convenience and Necessity issued by the U.S. DOT, authorizing performance of passenger and cargo interstate charter services supplementing the scheduled service of the certificated air carriers. The authority of supplemental A/C air carriers to engage in military charters is of an indefinite period. In addition, they can perform on an emergency basis, as may be authorized by the DOT, scheduled operations including the transportation of individually ticketed passengers and individually waybilled cargo.
- **Commercial Operator** (of large aircraft) - One of a class of air carriers operating on a private for-hire basis, as distinguished from a public or common air carrier, holding a commercial operator certificate, issued by the Administrator of the Federal Aviation Administration (pursuant to Part 45 of the Civil Air Regulations) authorizing it to operate (large) aircraft in air commerce for the transportation of goods or passengers for compensation or hire.
- **Air Travel Club** - A person who engages in the carriage by airplanes of persons who are required to qualify for that carriage by payment of an assessment, dues, membership fee, or other similar types of remittance.

AIRCRAFT ACCIDENT: As defined by the National Transportation Safety Board, an aircraft accident is "an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, and in which any person suffers death or serious injury as a result of being in or upon the aircraft or by direct contact with the aircraft or anything attached thereto, or in which the aircraft receives substantial damage."

AIRCRAFT REVENUE HOURS: The airborne hours in revenue service, computed from the moment an aircraft leaves the ground until it touches the ground again.

AIRCRAFT REVENUE MILES: The miles (computed in airport-to-airport distances) for each interairport hop actually completed in revenue service, whether or not performed in accordance with the scheduled pattern. For this purpose, operation to a flag stop is a hop completed even though a landing is not actually made. In cases where the interairport distances are inapplicable, aircraft miles flown are determined by multiplying the normal cruising speed for the aircraft type by the airborne hours.

AIR TAXI: The classification of air carriers that transport persons, property, and mail using small aircraft (under 30 seats or a maximum load of less than 7,500 pounds). An air taxi does not hold a Certificate of Public Convenience.

ALL-CARGO CARRIER: One of a class of air carriers holding an All Cargo Air Service Certificate issued under section 418 of the Federal Aviation Act and certificated in accordance with FAR Part 121 to provide domestic air transportation of cargo.

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY, "CC AND N": A certificate issued to an air carrier under Section 401 of the Federal Aviation Act, by the Department of Transportation, authorizing the carrier to engage in air transportation.

COACH: Transport service established for the carriage of passengers at special reduced passenger fares that are predicated on both the operation of specifically designated aircraft space and a reduction in the quality of service regularly and ordinarily provided.

COMMUTER AIR CARRIER: An air taxi operator who performs at least five round trips per week between two or more points and publishes flight schedules which specify the times, days of the week, and points between which such flights are performed.

DOMESTIC OPERATIONS: Operations within and between the 50 States, District of Columbia, the Commonwealth of Puerto Rico and the U.S. Virgin Islands. It also encompasses Canadian transborder operations and for certain carriers, Mexican transborder operations.

ECONOMY: Transport service established for the carriage of passengers at fares and quality of service below that of coach service.

FATAL INJURY: Any injury that results in death within thirty days of the accident.

FIRST-CLASS: Transport service established for the carriage of passengers moving at either standard fares or premium fares, or at reduced fares not predicated upon the operation of specifically allocated aircraft space, and for whom standard or premium quality services are provided.

FIXED-WING AIRCRAFT: Aircraft having nonrotating wings fixed to the airplane fuselage and outspread in flight.

FOREIGN FLAG AIR CARRIER: An air carrier other than a U.S. flag carrier engaged in international air transportation.

INTERNATIONAL OPERATIONS: Operations outside the territory of the United States, including operations between the United States and foreign countries. Prior to January 1981, statistics for Puerto Rico and the Virgin Islands operations are included in the international category rather than domestic. Includes both the combination passenger/cargo carriers and the all-cargo carriers engaged in international and territorial operations.

JET ENGINE: An engine which converts fuel and air into a fast-moving stream of hot gases which effect propulsion of the device of which the engine is a part.

JET FUEL: Includes both naphtha-type and kerosene-type fuel meeting standards for use in aircraft turbine engines. Although most jet fuel is used in aircraft, some is used for other purposes such as for generating electricity in gas turbines.

KEROSENE-BASE JET FUEL: A quality kerosene product with an average gravity of 40.7 degrees API and 10 to 90% distillation temperatures of 217 to 261 degrees C. Used primarily as fuel for commercial turbojet and turboprop aircraft engines. It is a relatively low freezing point distillate of the kerosene type.

LARGE REGIONALS: Large certificated air carriers with annual operating revenues of \$20,000,000 - \$99,999,999 or that operate aircraft with a seating capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds, or that conduct international operations. Included in this group are Air Transport Int'l., American Int'l., Amerijet, Arrow, Aspen, Braniff Int'l., Carnival, Challenge Air Cargo, Executive Airlines, Express One, Flagship, Florida West, Key, Kiwi, MGM Grand, Northern Air, Reeve, Reno, Rich, Simmons, Sun Country, Trans Continental, Trans States and Zantop. Airlines in this category are subject to periodic changes.

MAJORS: Large certificated air carriers with annual operating revenues of \$1,000,000,000+ or that operate aircraft with a seating capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds, or that conduct international operations. Included in this group are America West, American, Continental, Delta, Eastern, Federal Express, Northwest, Pan American, Southwest, Trans World, United, and USAir. Airlines in this category are subject to periodic changes.

MEDIUM REGIONALS: Large certificated air carriers with annual operating revenues of \$0 - \$19,999,999 or that operate aircraft with a seating of more than 60 seats or a maximum payload capacity of more than 18,000 pounds, or that conduct international operations. Included in this group are Aerial, Airline of the Americas, Airmark, AV Atlantic, Buffalo, Casino Express, Conner, Fine Airlines, Great American, Int'l. Cargo Xpress, Jet Fleet, Miami Air, Million, North American, Patriot, Private Jet, Ryan Int'l., Sierra Pacific, Spirit Air, Trans Air Link, Universal, Wilbur's, Worldwide, and Wrangler. Airlines in this category are subject to periodic changes.

NAPHTHA-BASE JET FUEL: A fuel in the heavy naphtha boiling range with an average gravity of 52.8 degrees API and 10 to 90% distillation temperatures of 117 to 233 degrees C. Used for turbojet and turboprop aircraft engines, primarily by the military. Excludes ramjet and petroleum.

NATIONALS: Large certificated air carriers with annual operating revenues of \$100,000,000 - \$1,000,000,000 or that operate aircraft with a seating capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds, or that conduct international operations. Included in this group are Air Wisconsin, Alaska, Aloha, American Trans Air, Emery, Evergreen, Hawaiian, Horizon Air, Markair, Midway, Midwest Express, Southern Air, Tower, United Parcel Service, USAir Shuttle, Westair, and World. Airlines in this category are subject to periodic changes.

NONREVENUE FLIGHTS: Flights and flight stages involving training, test, technical, positioning for scheduled flights, ferry, company business, publicity and forced returns for which no remuneration is received.

NONSCHEDULED FREIGHT: Property carried in charter operations.

NONSCHEDULED SERVICE: Revenue flights, such as charter flights, not operated in regular scheduled service and all nonrevenue flights incident to such flights.

OPERATING EXPENSES: Expenses incurred in the performance of air transportation. Includes direct aircraft operating expenses, ground, and indirect operating expenses.

OPERATING REVENUES: Includes revenues from the performance of air transportation and transport related activities. See "Transport Related Revenues."

OTHER TRANSPORT REVENUES: Miscellaneous revenues associated with air transportation performed by the air carrier, such as airline employees, officers and directors, or other persons, except ministers of religion who travel under reduced rated transportation; reservation cancellation fees; and other items not specified in other transport revenue accounts.

PASSENGER-MILE: One passenger transported one mile (5,280 feet). Passenger-miles are computed by summation of the products of the aircraft miles flown on each interairport flight stage multiplied by the number of passengers carried on that flight stage.

PASSENGER REVENUES: Revenues from the transportation of passengers by air.

REVENUE: Pertaining to activities for which remuneration is received by the carrier.

REVENUE PASSENGER: Person receiving air transportation for an air carrier for which remuneration is received by the carrier. Air carrier employees or others, except ministers of religion, elderly individuals and handicapped individuals, receiving air transportation against whom reduced rate charges (less than the applicable tariff) are levied are considered nonrevenue passengers. Infants for whom a token fare is charged are not counted as passengers.

REVENUE PASSENGER ENPLANEMENTS: The total number of passengers boarding aircraft.

REVENUE PASSENGER LOAD FACTOR: The percent that revenue passenger-miles are of available seat-miles in revenue passenger services, representing the proportion of aircraft seating capacity that is actually sold and utilized.

REVENUE PASSENGER-MILE: One revenue passenger transported one mile (5,280 feet) in revenue service. Revenue passenger-miles are computed by summation of the products of the revenue aircraft-miles flown on each interairport hop multiplied by the number of revenue passengers carried on that hop.

REVENUE PASSENGER TON-MILE: One ton of revenue passenger weight (including all baggage) transported one mile (5,280 feet). The passenger weight standard for both "Domestic" and "International" operations is 200 pounds.

REVENUE TON-MILE: One ton of revenue traffic transported one mile (5,280 feet).

REVENUE TON-MILE OF FREIGHT: One short ton of freight transported one mile (5,280 feet). Ton-miles are computed by summation of the products of the aircraft miles flown on each interairport flight stage multiplied by the number of tons carried on that flight stage.

SCHEDULED SERVICE: Transport service operated pursuant to published flight schedules, including extra sections and related nonrevenue flights.

SERIOUS INJURY: An injury on any aircraft that:

- requires hospitalization for more than 48 hours commencing within seven days from the date when the injury was received;
- results in a fracture of any bone except simple fractures of fingers, toes or nose;
- involves a laceration which causes a severe hemorrhage, nerve, tendon or muscle damage;
- involves injury to any internal organ; or
- involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

TRANSPORT-RELATED EXPENSES: Expenses from services related to air transportation such as in-flight sales of liquor, food and other items; ground, restaurant and food services, rental expense as lessor, interchange sales, general service sales, mutual aid, substitute service and air cargo service (other than actual air movement).

TRANSPORT-RELATED REVENUES: Revenues from transportation by air of all classes of traffic in scheduled and nonscheduled service, including the performance of charters.

U.S. FLAG CARRIER OR AMERICAN FLAG CARRIER: One of a class of air carriers holding a Certificate of Public Convenience and Necessity issued by the DOT, approved by the President, authorizing scheduled operations over specified routes between the U.S. (and/or its territories) and one or more foreign countries.

14 CFR 121: Revenue operations of air carriers, commercial operators and deregulated all cargo carriers, using large aircraft.

14 CFR 135: Commuter air carriers (scheduled) and on-demand air taxi operators (unscheduled) revenue operations, using small aircraft.

GENERAL AVIATION

ACTIVE AIRCRAFT: All legally registered civil aircraft which flew one or more hours.

AERIAL APPLICATION: Any use of an aircraft for work purposes which concerns the production of foods, fibers, and health control in which the aircraft is used in lieu of farm implements or ground vehicles for the particular task accomplished. This includes firefighting operations, the distribution of chemicals or seeds in agriculture, reforestation, or insect control.

AERIAL OBSERVATION: Any use of an aircraft for aerial mapping/photography, survey, patrol, fish spotting, search and rescue, hunting, highway traffic advisory, or sightseeing, not included under Part 135.

AIR TAXI: The classification of air carriers which transports persons, property, and mail using small aircraft (under 30 seats or a maximum payload capacity of less than 7,500 pounds). An air taxi does not hold a Certificate of Public Convenience and Necessity.

AVIATION GASOLINE (AVGAS): All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D 910. Includes all refinery products within the gasoline range that are to be marketed straight or in blends as aviation gasoline without further processing (i.e., any refinery operation except mechanical blending). Also includes finished components in the gasoline range which will be used for blending or compounding into aviation gasoline.

BUSINESS: Use of an aircraft not for compensation or hire by individuals for the purposes of transportation required by business in which they are engaged.

COMMUTER AIR CARRIER: An air taxi that performs at least five scheduled round trips per week between two or more points or carries mail.

CORPORATE: Any use of an aircraft by a corporation, company, or other organization for the purposes of transporting its employees and/or property not for compensation or hire, and employing professional pilots for the operation of the aircraft.

DEMAND AIR TAXI: Use of an aircraft operating under Federal Aviation Regulations, Part 135, passenger and cargo operations, including charter and excluding commuter air carrier.

GENERAL AVIATION: That portion of civil aviation which encompasses all facets of aviation except air carriers holding a Certificate of Public Convenience and Necessity issued by the DOT.

INSTRUCTIONAL: Any use of an aircraft for the purpose of formal instruction with the flying instructor aboard, or with the maneuvers on the particular flight(s) specified by the flight instructor; excludes proficiency flying.

PERSONAL: Any use of an aircraft for personal purposes not associated with a business or profession, and not for hire. This includes maintenance of pilot proficiency.

RENTAL: Aircraft owned for the purpose of renting; commercial flying club, leased, and rental aircraft activity.

OTHER WORK: Any aircraft used for construction work (not included under Part 135), helicopter, hoist, towing gliders, or parachuting.

OTHER: Any other use of an aircraft not included in above, i.e., experimentation, R&D, testing, demonstration, government.

HIGHWAY

ARTERIAL: A major highway, primarily for through traffic, usually on a continuous route.

FEDERAL EXPENDITURES: Intergovernmental payments to the State, District of Columbia, and local governments plus direct expenditures for capital outlay, maintenance, administration, and research.

HIGHWAY TRUST FUND: This is a grant-in-aid type fund administered by the FHWA. That is, most funds for highway improvements are apportioned to States in accordance with formulas that give weight to population, area and mileage.

INTERSTATE: Limited access divided facility of at least four lanes designated by the Federal Highway Administration as part of the Interstate System.

LOCAL STREETS AND ROADS: Streets whose primary purpose is feeding higher order systems, providing direct access with little or no through traffic.

MINOR ARTERIALS: Streets and highways linking cities and larger towns in rural areas in distributing trips to small geographic areas in urban areas (not penetrating identifiable neighborhoods).

OTHER PRINCIPAL ARTERIAL: Major streets or highways, many with multilane or freeway design, serving high-volume traffic corridor movements that connect major generators of travel.

ROADWAY: That part of a trafficway used for motor vehicle travel.

RURAL MILEAGE: Roads outside city, municipal district, or urban boundaries.

STATE AND LOCAL EXPENDITURES: Disbursements for capital outlay, maintenance and traffic surfaces, administration and research, highway law enforcement and safety, and interest on debt.

TRAFFICWAY: The entire width between property lines, or other boundary lines, of every way or place, of which any part is open to the public for purposes of vehicular travel as a matter of right or custom.

URBAN MILEAGE: Roads inside city, municipal district, or urban boundaries: includes extensions of the state primary system, and state secondary roads within delimited incorporated and unincorporated places, and mileage under local control; i.e., local city streets, roads, and public ways not under State control within such places.

PEDALCYCLIST: Person on a vehicle that is powered solely by pedals.

AUTOMOBILE

ACCIDENT: An accident is that occurrence in a sequence of events which usually produces unintended injury, death or property damage, on a trafficway or that occurs after the motor vehicle runs off the roadway but before events are stabilized.

COMPACT CAR: An automobile industry designation usually consisting of cars with a wheelbase between 100 and 104 inches.

FATAL MOTOR VEHICLE TRAFFIC ACCIDENT: An accident that involves a motor vehicle in transport on a trafficway and in which at least one person dies within 30 days of the accident.

FULL-SIZE CAR: An automobile industry designation usually consisting of cars with a wheelbase between 110 and 114 inches.

INTERMEDIATE CAR: An automobile industry designation usually consisting of cars with a wheelbase between 105 and 109 inches.

LARGE-SIZE CAR: An automobile industry designation usually consisting of cars with a wheelbase of greater than 114 inches.

LOCAL RURAL ROADS: Streets outside urban boundaries other than principal arteries of travel.

MAIN RURAL ROADS: Streets outside urban boundaries that are generally recognized as principal arteries of travel.

MINI-SUBCOMPACT CAR: An automobile industry designation usually consisting of cars with a wheelbase of less than 95 inches.

MOTORCYCLE: A two- or three-wheeled motor vehicle designed to transport one or two people.

MULTIPURPOSE PASSENGER VEHICLE: A motor vehicle with motive power, except a trailer, designed to carry 10 persons or less which is constructed either on a truck chassis or with special features for occasional off-road operation.

NONOCCUPANT: Any person who is not an occupant of a motor vehicle in transport and includes: pedestrians, pedalcyclists, occupants of parked motor vehicles, and others such as joggers, skateboard riders, people riding on animals, and persons riding in animal-drawn conveyances.

OCCUPANT: Any person who is in or upon a motor vehicle in transport and includes the driver, passengers, and persons riding on the exterior of a motor vehicle (e.g., a skateboard rider who is set in motion by holding onto a vehicle).

PASSENGER: Any occupant of a motor vehicle who is not a driver.

PASSENGER CAR: Any of the following types of motor vehicles: convertible; 2-door sedan, hardtop, coupe; 4-door sedan or hardtop, coupe; 3- or 5-door hatchback; automobile with pickup body; station wagon; and other small 4-wheel motor vehicles used primarily for carrying passengers.

PASSENGER-MILES: This figure represents the total distance traveled by all passengers in passenger cars and taxis. One passenger traveling one mile (5,280 feet) generates one passenger-mile.

PEDESTRIAN: Any person not traveling in or upon a motor vehicle or other vehicle.

SUBCOMPACT CAR: An automobile industry designation usually consisting of cars with a wheelbase between 95 and 99.

URBAN STREETS: Street within urban boundaries.

VEHICLE-MILES: Automobile vehicle-miles are estimated by calculating the number of gallons of gas sold from gasoline tax receipts and multiplying by the average number of miles per gallon.

VEHICLE-MILE (BY TYPE OF STREET): These figures represent the total number of miles traveled by passenger cars, taxis, and motorcycles on the different types of streets. One vehicle traveling one mile (5,280 feet) generates one vehicle-mile.

BUS

AVERAGE PASSENGER TRIP LENGTH: Calculated by dividing revenue passenger-miles by the number of revenue passengers.

COMMERCIAL BUS: Any bus used to carry passengers at rates specified in tariffs; charges may be computed per passenger (as in regular route service) or per vehicle (as in charter service).

INTERCITY BUS-CLASS I: An interstate motor carrier of passengers with an average annual gross revenue of at least \$1,000,000 is defined by the ICC as a Class I carrier.

INTERCITY BUS-TOTAL: This figure includes Class I, II, and III interstate carriers, all of which report to the Interstate Commerce Commission, and intrastate carriers.

REVENUE PASSENGERS: Passengers on a commercial bus by or for whom a fare is paid.

REVENUE PASSENGER-MILES: One revenue passenger carried one mile (5,280 feet) generates one passenger-mile. The revenue passenger-miles reported thus represent the total distance traveled by all bus passengers.

SCHOOL BUS: A specific type of vehicle which independent of ownership or design, is used to transport children to and from school, or to and from school activities.

SCHOOL BUS - RELATED ACCIDENT: Any accident in which a vehicle, regardless of body design, used as a school bus is directly or indirectly involved, such as an accident involving school children alighting from a vehicle.

VEHICLE-MILE: One vehicle traveling one mile (5,280 feet) generates one vehicle-mile. Thus, total vehicle-miles is the total mileage traveled by all vehicles.

TRUCK

AVERAGE LENGTH OF HAUL (MILES): The total number of ton-miles divided by the total number of tons carried.

COMBINATION TRUCKS: Consist of a power unit (a truck tractor) and one or two trailing units (a semi-trailer). The most frequently used combination is popularly referred to as a "tractor-semitrailer" or a "tractor trailer."

GROSS VEHICLE WEIGHT (GVW): The maximum rated capacity of a vehicle which includes the weight of the vehicle, all added equipment, driver and passengers, and load.

HEAVY TRUCK: 1. Single-unit truck with GVW greater than 26,000 lbs; 2. Tractor-trailer combination; 3. Truck with cargo trailers; 4. Truck-tractor pulling no trailer.

ICC-REGULATED CARRIER: A motor common carrier operating in interstate commerce under a grant of authority from the Interstate Commerce Commission and subject to its economic regulation.

LIGHT TRUCK: Trucks under 10,000 lbs. GVW (e.g., pickups, vans, and station wagons).

MEDIUM TRUCK: Any single-unit truck with GVW between 10,000 and 26,000 lbs.

NON-ICC REGULATED CARRIER: A motor carrier not subject to the economic regulation of the ICC. The category includes intrastate carriers, private carriers hauling only the goods of their owners, and carriers of commodities, the transportation of which is exempt from ICC economic regulation.

OCCUPANT: Any person who is in or upon a motor vehicle in transport and includes the driver, passengers and persons riding on the exterior of a motor vehicle (e.g., a skateboard rider set in motion by holding onto a vehicle).

OPERATING EXPENSES: This includes expenditures for equipment maintenance, supervision, wages, fuel, equipment rental, terminal operations, insurance, safety, and administrative and general functions.

OPERATING REVENUES OF CLASS I INTERCITY MOTOR CARRIERS: This term is defined by the ICC to include the five categories of revenue listed in the text.

REVENUE: The total amounts received by carriers for transportation and other services.

SINGLE-UNIT TRUCK (2-axle, 4-tire): Includes pickup trucks, panel trucks, vans, and other vehicles (such as campers, motor homes, etc.)

TAXES ASSIGNABLE TO OPERATIONS: Includes the amount of federal, state, county, municipal, and other taxing district taxes which relate to motor carrier operations and property use therein (except income taxes on ordinary income).

TON-MILES: The transportation of one short ton (2,000 lbs) of freight a distance of one mile (5,280 feet) generates one ton-mile.

VEHICLE-MILES: This term includes miles operated by power units upon urban streets, main rural roads, and local rural roads.

LOCAL TRANSIT

COMMUTER RAIL: Those portions of "main-line railroad" (not "electric railway") transportation operations which encompass urban passenger train service for local travel between a central city and adjacent suburbs; commuter railroad service—using both locomotive-hauled and self-propelled railroad passenger cars—is characterized by multitrip tickets, specific station-to-station fares, railroad employment practices, and usually only one or two stations in the central business district.

DEMAND RESPONSE VEHICLE: A type of non-fixed-route bus or van service characterized by passengers boarding and alighting at any location within the transit provider's service area. Vehicles pick up and discharge passengers at times requested by the passengers by prior arrangement, either by telephone for "dial-a-ride" service, or other prescheduling arrangements.

FERRYBOAT: Passenger-carrying marine vessel providing frequent "bridge" service over a fixed-route and on a published time schedule between two or more points.

HEAVY RAIL: A type of electric transit vehicle railway with the capacity for a "heavy volume" of traffic and characterized by exclusive rights-of-way, multicar trains, high speed and rapid acceleration, sophisticated signaling, and high platform loading. Also known as "subway," "elevated (railway)," or "metropolitan railway (metro)."

LIGHT RAIL: A type of electric transit vehicle railway with a "light volume" traffic capacity compared to "heavy rail." Light rail may be on exclusive or shared rights-of-way, high or low platform loading, multicar trains or single cars, automated or manually operated. In generic usage, light rail includes "streetcars," "trolley cars," and "tramways"; in specific usage, light rail refers to very modern and more sophisticated developments of these older rail modes.

MOTOR BUS: Rubber-tired, self-propelled, manually steered transit vehicle with fuel supply carried onboard the vehicle. Motor bus types include: Advanced Design Bus, Articulated Bus, Double Deck Bus, Intercity Bus, Medium Size Bus, New Look Bus, Sightseeing Bus, Small Bus, Standard-Size Bus, Suburban Bus, Transit Bus, and Van.

OTHER REVENUE VEHICLES: Other modes of transit service such as cable cars, personal rapid transit systems of varying designs, monorail vehicles, inclined railway cars, etc., not covered otherwise.

OPERATING EXPENSES: The total of all expenses associated with operation of an individual mode by a given operator. At the required level, total operating expense is reported on line 14 of Form 301 for a single mode system, and is derived from Form 310 for a multimode system. Operating expenses include distributions of "joint expenses" to individual modes, and exclude "reconciling items" such as interest expenses and depreciation. Do not confuse with 'vehicle operations expense'.

OPERATING REVENUE: Includes passenger revenue and revenue from charter and contract services.

PASSENGER-MILE: The number of person-miles traveled by all passengers riding transit vehicles; one person traveling one mile aboard a transit vehicle is one passenger-mile.

PASSENGER REVENUE: Fares, including transfer charges and zone charges, paid by transit passengers traveling aboard transit vehicles operating in regular fixed-route and special demand-response service; also known as "farebox revenue." Beginning in 1984, also includes fare revenue retained by contractors operating transit service and not turned over to transit system.

RAIL RAPID TRANSIT: Transit vehicles operating over completely grade-separated exclusive right-of-way. The term rail rapid transit, also known as "rapid rail transit," applies to both operation of light rail vehicles over exclusive right-of-way and operation of heavy rail vehicles.

REVENUE PASSENGERS: Single-vehicle transit rides by initial-board (first-ride) transit passengers only; excludes all transfer rides and all nonrevenue rides.

REVENUE VEHICLE-MILES: One vehicle (bus, trolleybus, streetcar, etc.) traveling one mile (5,280 feet) while revenue passengers are on board generates one revenue vehicle-mile. The revenue vehicle-miles reported thus represent the total mileage traveled by vehicles in scheduled or unscheduled revenue-producing services.

STREETCARS: Relatively lightweight passenger rail cars operating singly or in short trains or fixed rails in right-of-way that is not always separated from other traffic for much of the way. Streetcars do not necessarily have the right-of-way at grade crossings with other traffic.

TROLLEYBUS: Rubber-tired electric transit vehicle, manually steered, propelled by a motor drawing current—normally through overhead wires—from a central power source not on board the vehicle.

UNLINKED PASSENGER TRIPS: Transit trips taken by both initial-board (originating) and transfer (continuing) transit passengers; includes charter rides and special rides. Each passenger is counted each time that person boards a transit vehicle regardless of the type of fare paid or transfer presented.

VANPOOL: A type of transit service in which passengers share a van with one passenger designated "driver." The route is "fixed," but varies as passengers change. Purchase, maintenance, and recruitment of passengers may be handled by a sponsoring transit system. Fares may be charged, or the cost may be divided as agreed by the passengers.

VEHICLE MAINTENANCE EXPENSES: The inspection, maintenance and repair of vehicles, such as mechanics wages and fringe benefits, maintenance supplies, repair parts, outside maintenance and repair work.

VEHICLE-MILES OPERATED: Sum of all miles operated in regular service, special service, and nonrevenue service by transit vehicles that carry passengers. When vehicles are operated in trains, each vehicle is counted separately, e.g., an eight-vehicle train operating for one mile equals eight vehicle miles.

VEHICLE OPERATIONS EXPENSES: The costs associated with operating vehicles, such as operators' wages and fringe benefits, fuel, tires, and vehicle licensing.

WATER TRANSPORT

BULK CARRIER: Ships designed to carry dry bulk cargo. Includes ore/bulk/oil carriers and other combination bulk/oil, and ore/oil carriers.

BUNKER C/NUMBER 6 FUEL OIL: A high viscosity oil used mostly by ships, industry, and large-scale heating installations. This heavy fuel requires preheating in the storage tank to permit pumping and additional preheating to permit atomizing at the burners.

CASUALTY: Casualties involving commercial vessels are required to be reported to the Coast Guard whenever the casualty results in:

- actual physical damage to property in excess of \$25,000;
- material damage affecting the seaworthiness or efficiency of a vessel;
- stranding or grounding;

- loss of life; or
- injury causing any person to remain incapacitated for a period in excess of 72 hours, except injury to harbor workers not resulting in death and not resulting from vessel casualty or vessel equipment casualty.

CLASS A CARRIERS BY INLAND AND COASTAL WATERWAYS: A Class A carrier by water is one with an average annual operation revenue that exceeds \$500,000.

CLASS B CARRIERS BY INLAND AND COASTAL WATERWAYS: A Class B carrier by water is one with an average annual operating revenue greater than \$100,000 but less than \$500,000.

COASTWISE TRAFFIC: Domestic traffic is coastwise when it moves over the ocean, or the Gulf of Mexico; i.e., between New Orleans and Baltimore, New York and Puerto Rico, San Francisco and Hawaii, Puerto Rico and Hawaii. Traffic between Great Lakes ports and seacoast ports, when having a carriage over the ocean, is also deemed to be coastwise. The Chesapeake Bay and Puget Sound are considered internal bodies of water rather than arms of the ocean; traffic confined to these areas is deemed to be "internal" rather than coastwise.

DEADWEIGHT TONNAGE: The carrying capacity of a vessel in long tons (2,240 pounds). It is the difference between the light ship weight and the displacement loaded.

DOMESTIC FREIGHT: All waterborne commercial movements between points in the United States, Puerto Rico and the Virgin Islands, excluding traffic with the Panama Canal Zone. Cargo moved for the military in commercial vessels is reported as ordinary commercial cargo; military cargo moved in military vessels is omitted.

DOMESTIC PASSENGER: Any person traveling on a public conveyance by water between points in the United States, Puerto Rico, and the Virgin Islands.

DRY CARGO BARGES: Large flat-bottomed, non-self-propelled vessels used to transport dry bulk materials such as coal and ore.

EXPORTS: Outbound international freight including re-export of foreign merchandise.

FATALITY: All deaths and missing persons resulting from a vessel casualty.

FREIGHTERS: General cargo carriers, full containerships, partial containerships, roll-on/roll-off (Ro-Ro) ships, and barge carriers.

IMPORTS: Inbound international freight.

INJURY: All personal injuries resulting from a vessel casualty.

INLAND AND COASTAL WATERWAYS:

INLAND AND COASTAL CHANNELS: These terms include the Atlantic Coast Waterways, the Atlantic Intracoastal Waterway, the New York State Barge Canal System, the Gulf Coast Waterways, the Gulf Intracoastal Waterway, the Mississippi River System (including the Illinois Waterway), Pacific Coast Waterways, the Great Lakes, and all other channels (waterways) of the United States, exclusive of Alaska, that are usable for commercial navigation.

INTERNAL TRAFFIC: Traffic is internal when the entire movement between ports or landings takes place on inland waterways. The following types of movements are also termed internal: movements involving carriage on both inland waterways and waters of the Great Lakes, inland movements that cross short stretches of open waters that link inland systems; marine products, sand and gravel taken directly from beds of the oceans, the Gulf of Mexico and important arms thereof, and movements between offshore installations and inland waterways.

INTERNATIONAL (FOREIGN) FREIGHT: Movements between the United States and foreign countries and between Puerto Rico, the Virgin Islands and foreign countries. Trade between U.S. territories and possessions (i.e., Guam, Wake, American Samoa, etc.) and foreign countries is excluded. Traffic to or from the Panama Canal Zone is included.

INTERNATIONAL PASSENGER: Any person traveling on a waterborne public conveyance between the United States and foreign countries and between Puerto Rico and the Virgin Islands and foreign countries.

INTRATERRITORIAL TRAFFIC: Traffic between ports in Puerto Rico and the Virgin Islands, which are considered as a single unit.

LAKEWISE OR GREAT LAKES: These terms apply to traffic between U.S. ports on the Great Lakes system. The Great Lakes system is treated as a separate system rather than as a part of the inland system.

LOCAL: Movements of freight within the confines of a port, whether the port has only one or several arms or channels, except car-ferry and general ferry, are termed "local." The term is also applied to marine products, sand, and gravel taken directly from the Great Lakes.

MARITIME CARRIERS: Maritime carriers operate on the open sea; i.e., their operations must include a foreign or international component and may include a domestic component.

MARITIME REVENUE: Revenue received for operations in international or foreign shipping.

NON-SELF-PROPELLED: Vessels not containing within themselves the means for their own propulsion.

NON-VESSEL-CASUALTY-RELATED DEATH: Death that occurs onboard a commercial vessel but not as a result of a vessel casualty, such as collision, fire, or explosion.

PASSENGER/COMBINATION VESSELS: Ships with a capacity for 13 or more passengers.

PASSENGER-MILE, INTERCITY: Moving one passenger one mile on a trip between two cities generates one intercity passenger mile.

PASSENGER VESSELS: Domestic passenger service, other than short-haul ferry, is limited. However, two operators offer coastwise and river system cruises with small cruise vessels accommodating about 100 passengers each. One operator provides cruises within the Hawaiian Islands, using a refurbished trans-Atlantic passenger liner. The State of Alaska seasonally operates several large passenger/vehicle ferries between Seattle and points in southeastern Alaska, plus service between points in and around Cook Inlet and Prince William Sound.

SELF-PROPELLED TOWBOAT: A compact, shallow-draft boat with a squared bow and towing "knees" for pushing tows of barges on inland waterways.

SCOWS: Large, flat-bottomed non-self-propelled vessels used to transport sand, gravel, or refuse.

TANKERS: Crude petroleum, petroleum product, and chemical tankers, LNG and LPG tankers, wine, molasses, and whaling tankers.

TANKSHIP: Carries liquid cargo in bulk, stowed in cargo tanks within vessel hull. Cargo is pumped aboard by a shore terminal and unloaded using the vessel's installed pumping system. It is one of the largest and newest vessels used in domestic commerce, with sizes ranging from 16,000 to 190,000 deadweight tons. Commonly referred to as "tanker." Approximately 180 are presently in domestic service.

TON-MILE: Moving one ton one mile (5,280 feet) generates one ton-mile.

TONS OF FREIGHT HAULED: The figures for tons of freight hauled on domestic waterways include exports and imports.

TUG: A strongly built, self-propelled boat used for towing and pushing.

VESSEL-CASUALTY-RELATED DEATH: Death that occurs onboard a commercial vessel as a result of a vessel casualty, such as collision, fire, or explosion.

WATERBORNE TRANSPORTATION: Transport of freight and/or people by commercial vessels under USCG jurisdiction.

RECREATIONAL BOATING

ACCIDENT: Occurrences involving recreational vessels or their equipment are required to be reported whenever they result in 1. a death; 2. a person is injured and requires medical treatment beyond first aid; 3. damage to the vessel and other property damage totaling more than \$200; or 4. a person's disappearing from the vessel under circumstances indicating death or injury.

FATALITY: All deaths (other than deaths by natural causes) and missing persons resulting from an occurrence that involves a vessel or its equipment.

INJURY: All injuries meeting the criteria set forth above, resulting from an occurrence that involves a vessel or its equipment.

RAILROAD

AMTRAK (AMERICAN RAILROAD TRACKS): Operated by the National Railroad Passenger Corporation of Washington, D.C. This rail system was created by President Nixon in 1970 and was given the responsibility for the operation of intercity, as distinct from suburban, passenger trains between points designated by the Secretary of Transportation.

AVERAGE HAUL: The average distance in miles that one ton is carried. It is computed by dividing the number of ton-miles generated by the number of tons carried to generate that number of ton-miles.

AVERAGE PASSENGER TRIP LENGTH: Calculated by dividing the number of revenue passenger-miles by the number of revenue passengers carried.

CAR-MILE: The movement of a car the distance of one mile (5,280 feet).

CLASS I RAILROAD: A railroad with an annual operating revenue of greater than \$93,500,000 effective January 1, 1990. The minimum annual operating revenue requirement is adjusted each year on January 1.

FATALITY: 1. Death of any person from an injury within 365 days of the accident/incident; or 2. Death of a railroad employee from occupational illness within 365 days after the occupational illness was diagnosed by a physician.

FREIGHT REVENUE: Revenue from the transportation of freight and from the exercise of transit, stop-off, diversion, and reconsignment privileges, as provided for in tariffs.

INJURY: 1. Injury to any person other than a railroad employee that requires medical treatment; or 2. Injury to a railroad employee that requires medical treatment or results in restriction of work or motion for one or more workdays, one or more lost workdays, termination of employment, transfer to another job, or loss of consciousness.

LINE MILEAGE: The aggregate length of roadway of all line-haul railroads. It does not include the mileage of yard tracks or sidings, nor does it reflect the fact that a mile of railroad may include two or more parallel tracks. Jointly-used track is counted only once.

LOCOMOTIVE: Self-propelled units of equipment designed solely for moving other equipment.

LOCOMOTIVE-MILE: The movement of a locomotive unit the distance of one mile (5,280 feet).

NONTRESPASSERS: Persons who are lawfully on that part of railroad property that is used in railroad operation and persons adjacent to railroad premises and injured as the result of the operation of a railroad.

OPERATING EXPENSE: Expenses of furnishing transportation service, including maintenance and depreciation of the plant used in the service.

OPERATING REVENUE: The amount of money that a carrier receives from transportation operations.

OTHER REVENUE: This is a general heading that includes revenues from miscellaneous operations (i.e., dining and bar car services), income from lease of road and equipment, miscellaneous rent income, income from nonoperating property, profit from separately operated properties, dividend income, interest income, income from sinking and other reserve funds, release or premium on funded debt, contributions from other companies, and other miscellaneous income.

PASSENGER REVENUE: Revenue from the sale of tickets.

PASSENGER TRAIN-CARS: Cars typically found in passenger trains include coaches, sleeping cars (formerly called Pullman cars), parlor cars, dining cars, lounge cars, baggage cars, crew-dormitory cars, and observation cars.

RAIL-HIGHWAY GRADE CROSSING: A location where one or more railroad tracks cross a public highway, road, or street or a private roadway at grade, including sidewalks and pathways at, or associated with, the crossing.

RAIL-HIGHWAY GRADE-CROSSING ACCIDENT: Any impact between railroad on-track equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, or pedestrian, at a rail-highway grade crossing.

RAIL MOTOR CARS: Self-propelled passenger rail cars which are driven by electric motors energized from an electrified roadway or by a generator driven by a diesel or gas turbine engine.

REVENUE PASSENGERS CARRIED: Number of one-way trips made by persons holding tickets.

REVENUE PASSENGER-MILE: One revenue passenger traveling one mile (5,280 feet) generates one revenue passenger-mile. The revenue passenger-miles reported thus represent the total distance traveled by all railroad passengers.

REVENUE TON-MILES: The product of weight of the contents of a freight car in tons and the distance transported in miles; i.e., n tons moving m miles generate $n \times m$ revenue ton-miles.

TRAIN ACCIDENT: A collision, derailment, fire, explosion, act of God, or other event involving operation of railroad on-track equipment which, while it does not necessarily result in a reportable death, injury, or illness, results in more than \$4,900 in damages to railroad on-track equipment, signals, track, track structures, or roadbed. Prior to 1985, this threshold stood at \$4,500; prior to 1983, at \$3,700; prior to 1981, at \$2,900.

TRAIN-MILE: The movement of a train the distance of one mile (5,280 feet).

TRESPASSERS: Persons who are on that part of railroad property used in railroad operation, and whose presence is prohibited, forbidden or unlawful. A person on a rail-highway grade crossing is classified as a trespasser if the crossing is protected by gates or other similar barriers which were closed when the person entered the crossing. He is also a trespasser if he attempts to pass over or under trains or cars at the crossings.

RAIL RAPID TRANSIT

ACCIDENT: Vehicle-only based incidents resulting from collision with a vehicle, object, or person (except suicides) or a derailment/left roadway.

COLLISION WITH VEHICLE: An incident in which a transit vehicle strikes or is struck by another vehicle. Reports are made if the incident results in a death, injury, or property damage over \$1,000.

COLLISION WITH OBJECT: An incident in which a transit vehicle strikes an obstacle (e.g., shopping cart, building or utility pole) other than a vehicle or person. Reports are made if the incident results in a death, injury, or property damage of \$1,000.

COLLISION WITH PERSON: An incident in which a transit vehicle strikes a person. Except where indicated, it does not include suicide attempts. Reports are made if the incident results in a death, injury, or property damage of \$1,000.

DERAILMENT/LEFT ROADWAY: A noncollision incident in which a transit vehicle leaves the rails or road; this also includes rollovers. Reports are made for all occurrences.

FATALITY: A transit-caused death confirmed within 30 days of a transit incident.

INCIDENT: An unforeseen event which causes death, injury, fire, or property damage over \$1,000. This includes all revenue vehicle operations and activities within transit facilities.

INJURY: Any physical damage or harm to a person; there are no thresholds for reporting.

PASSENGER ACCIDENT: A passenger-based combination of incidents related only to the use of a transit vehicle. These result from collision with a vehicle, object, or person (except suicides); a derailment/left roadway; personal casualty on vehicle; or personal casualty entering/exiting the vehicle.

PERSONAL CASUALTY ON VEHICLE: An event in which people are hurt on a transit vehicle, but not as a result of a collision, derailment, or fire.

PERSONAL CASUALTY ENTER/EXIT: An event in which people are hurt while getting on or off a transit vehicle, not a result of a collision, derailment, or fire (e.g., falls or door incidents).

PERSONAL CASUALTY LIFTS: An event in which people are hurt while using a lift to get on or off a transit vehicle (not as a result of a collision, derailment, or fire).

PERSONAL CASUALTY STATION/STOP: An event in which people are hurt while using a transit facility. This includes all people on transit property (workers, patrons, and trespassers), but not incidents resulting from illness or criminal activity.

PERSONAL CASUALTY ESCALATOR: An event in which people are hurt while using an escalator in a transit facility.

PROPERTY DAMAGE: The amount paid to restore or replace transit vehicles damaged by an accident. This does not include the cost of clearing wreckage.

OIL PIPELINE

AVERAGE LENGTH OF HAUL (miles): The total number of ton-miles divided by the total number of tons transported.

BARREL (OIL): A volumetric unit of measurement equivalent to 42 U.S. standard gallons.

COKE: The residue left by petroleum which has been distilled to dryness.

CRUDE OIL: A mixture of hydrocarbons that exists in the liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface-separating facilities.

CRUDE OIL GATHERING LINES: A network of pipelines transporting crude oil from individual wells to compressor station, processing point, or main trunk pipeline.

CRUDE OIL TRUNK LINES: One of three types of pipeline network that is used to transport crude oil to the refineries for processing.

DISTILLATE FUEL OIL: The lighter fuel oils distilled off during the refining process. Included are products known as ASTM grades Nos. 1 and 2 heating oils, diesel fuels, and No. 4 fuel oil. The major uses of distillate fuel oils include heating, fuel for on- and off-highway diesel engines, and railroad diesel fuel.

FERC-REGULATED PIPELINE: A pipeline company operating in interstate commerce under a grant of authorization from the Federal Energy Regulatory Commission and subject to economic regulation by the Commission. Such a pipeline company is required to report relevant statistics to the FERC.

LIQUID TRANSMISSION: Pipelines carrying hazardous material, petroleum and petroleum products in liquid form.

- Accident - Release of the commodity transported as presented in 49 CFR Section 195.50.
- Fatality - Death resulting from the escape of liquid.
- Injury - An injury requiring medical treatment other than on-site first aid.

NO. 2 DISTILLATE FUEL OIL: A petroleum distillate which meets the specifications for No. 2 heating oil and/or the specifications for diesel fuel grade No. 2.

NONREGULATED PIPELINE: A pipeline company not operating as a common carrier in interstate commerce, hence required neither to secure a grant of operating authority from the Federal Energy Regulatory Commission nor to report to it.

OPEC: Organization of Petroleum Exporting Countries including Saudi Arabia, Iran, Venezuela, Libya, Indonesia, United Arab Emirates, Algeria, Nigeria, Ecuador, Gabon, Iraq, Kuwait, and Qatar.

OPERATING EXPENSES: Expenditures necessarily made while providing services by which operating revenue is earned.

OPERATING REVENUE: Revenue from the transportation of oil and from services incidental to such transportation.

OTHER DISTILLATE FUEL OILS: All other refined petroleum products not included in any other category and which, when produced in conventional distillation operations, have a boiling range from 10% point at 167 degrees C to 90% point at 375 degrees C. Included are products known as No. 1 and No. 4 distillate fuel oils and diesel oils.

PETROLEUM: A material occurring naturally in the earth and predominantly composed of mixtures of chemical compounds of carbon and hydrogen with or without other nonmetallic elements such as sulfur, oxygen, nitrogen, etc. Petroleum may contain, or be composed of, such compounds in the gaseous, liquid, and/or solid state, depending on the nature of these compounds and the existent conditions of temperature and pressure.

PETROLEUM CONSUMPTION, ELECTRIC UTILITY SECTOR: Domestic demand for all fuel oils at electric utilities.

PETROLEUM CONSUMPTION, INDUSTRIAL SECTOR: Domestic demand for petroleum products for use by establishments engaged in processing unfinished materials into another form or product. Excludes industrial space heating.

PETROLEUM CONSUMPTION, "OTHER" SECTOR: Domestic demand for miscellaneous products and for some agricultural uses.

PETROLEUM CONSUMPTION, RESIDENTIAL AND COMMERCIAL: Domestic demand for petroleum products by private households and nonmanufacturing establishments. Includes industrial space heating and road paving.

PETROLEUM CONSUMPTION, TRANSPORTATION SECTOR: Domestic demand for petroleum products for on-highway use, aircraft and vessel bunkering, and railroad use.

PIPELINE: All parts of those physical facilities through which gas is moved in transportation, including pipe, valves and other appurtenances attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders and fabricated assemblies.

REFINED PRODUCT TRUNK LINES: One of three types of pipeline network that is used to transport refined petroleum products (i.e., gasoline, kerosene, residual oil, etc.) from the refineries to local distribution centers near large market areas.

RESIDUAL FUEL OIL: The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as ASTM grade Nos. 5 and 6 oil, heavy diesel oil, Navy Special Fuel Oil, Bunker C oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of electric power, for heating, and for various industrial purposes.

GAS PIPELINE

GAS, DISTRIBUTION COMPANY: A company that obtains the major portion of its gas operating revenues from the operation of a retail gas distribution system, and which operates no transmission system other than incidental connections within its own system or the system of another company. A distribution company obtains at least 90 percent of its gas operating revenues from sales to ultimate customers and classifies at least 90 percent of mains (other than service pipe) as distribution.

GAS, TRANSMISSION COMPANY: A company which obtains at least 90 percent of its gas operating revenues from sales for resale and/or transportation of gas for others and/or main line sales to industrial customers and classifies at least 90 percent of mains (other than service pipe) as field and gathering, storage and/or transmission.

GAS TRANSMISSION: Pipelines transporting natural gas, flammable gas or gas which is toxic or corrosive in transmission or gather operations.

- **Accident** - 1. An event that involves the release of gas from a pipeline or of liquefied natural gas or gas from an LNG facility resulting in a death, or personal injury necessitating in-patient hospitalization; or estimated property damage, including cost of gas lost, of the operator or others, or both, of \$50,000 or more; 2. An event that results in an emergency shutdown of an LNG facility; or 3. an event that is significant, in the judgment of the operator, even though it did not meet the criteria of (1.) or (2.).
- **Fatality** - Death resulting from the failure or escape of gas.
- **Injury** - An injury involving lost time or other than on-site medical treatment.

DISTRIBUTION MAINS: Generally, mains, services, and equipment that carry or control the supply of gas from the point of local supply to and including the sales meters.

FIELD AND GATHERING PIPELINES: A network of pipelines (mains) transporting natural gas from the individual wells to a compressor station, processing point, or main trunk pipeline.

LIQUID PETROLEUM GAS (LPG): A gas containing certain specific hydrocarbons which are gaseous under normal atmospheric conditions but can be liquefied under moderate pressure at normal temperatures. Propane and butane are the principal examples.

MAINS: A distribution line that serves as a common source of supply for more than one gas service line.

NATURAL GAS: A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in porous geologic formations beneath the earth's surface, often in association with petroleum. The principal constituent is methane.

LIQUEFIED NATURAL GAS (LNG): Natural gas that has been liquefied by reducing its temperature to -260°F at atmospheric pressure.

REPRESSURING: Forcing gas, under pressure, into the oil reservoir in an attempt to increase the recovery of crude oil; also done with water.

TRANSMISSION PIPELINE: Pipelines (mains) installed for the purpose of transmitting gas from a source or sources of supply to one or more distribution centers, or to one or more large-volume customers, or a pipeline installed to interconnect sources of supply. In typical cases, transmission lines differ from gas mains in that they operate at higher pressures, are longer, and the distance between connections is greater.

HAZARDOUS MATERIALS

FATALITY: Death that was due to a hazardous material.

HAZARDOUS MATERIAL: A substance or material which has been designated by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated.

INCIDENT: Any unintentional release of hazardous material while in transit or storage.

MAJOR INJURY: 1. Injuries requiring hospitalization; 2. Injuries involving second- or third-degree burns; or 3. Injury-related lost time at work of one or more days such as would be caused by inhalation of strong, irritating vapors are classified as major injuries. All other reported injuries are considered minor.

ENERGY

ASPHALT: A dark-brown-to-black cement-like material containing bitumens as the predominant constituents, obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products; cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts.

AVIATION GASOLINE, FINISHED: All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D910. Excludes blending components that will be used in blending or compounding into finished aviation gasoline.

BTU—BRITISH THERMAL UNIT: The heat required to raise the temperature of one pound of water by 1°F at or near 39.2°F.

ELECTRIC UTILITY: A corporation, person, agency, authority, or other entity that owns or operates facilities for the generation, transmission, distribution, or sale of electricity, primarily for use by the public.

ENERGY EFFICIENCY: In reference to transportation, the inverse of energy intensiveness: the ratio of outputs from a process to the energy inputs; for example, passenger-miles traveled (PMT) per gallon of fuel.

FOSSIL FUELS: Any naturally occurring fuel of an organic nature such as coal, crude oil, or natural gas.

GASOHOL: A blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol but sometimes methanol) in which 10 percent or more of the product is alcohol.

GASOLINE: A refined petroleum product which, by its composition, is suitable for use as a fuel in internal combustion engines.

MOTOR GASOLINE, FINISHED: A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines and conforming to ASTM Specification D439. Included are the following:

LEADED REGULAR: A gasoline that has an antiknock index of 89 with the use of lead additives or which contains more than 0.05 grams of lead per gallon or more than 0.05 grams of phosphorus per gallon.

UNLEADED REGULAR: A gasoline having an antiknock index of 87 containing not more than 0.05 grams of lead per gallon and not more than 0.005 grams of phosphorus per gallon.

LEADED PREMIUM: A gasoline having an antiknock index of 93 with the use of lead additives or which contains more than 0.05 grams of lead per gallon or more than 0.005 grams of phosphorus per gallon. Includes gasohol.

UNLEADED PREMIUM: A gasoline having an antiknock index of 90 containing not more than 0.05 grams of lead per gallon and not more than 0.005 grams of phosphorus per gallon. Includes gasohol.

PSI: Pounds per square inch.

ROAD OIL: Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades from 0, the most liquid, to 5, the most viscous.

APPENDIX C

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APPENDIX D

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* U.S. GOVERNMENT PRINTING OFFICE:1993-702-212/80036

Heat Content for Various Fuels

1 quad Btu = .4724 million barrels crude per day = .1724 billion barrels crude per year

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